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PART A
INSTITUTIONAL INFORMATION

1. Name and Address of the Institution

Mar Ephraem College of Engineering and Technology,
Malankara Hills,
Elavuvillai, Marthandam.- 629171
Tamil Nadu
E-mail: marephraem@gmail.com
Phone No:04651 - 273111,271111
Fax: 04651 – 272158
Website: www.marephraem.edu.in

2. Name and Address of Affiliating University

Anna University, Guindy,
Chennai – 600025
Tamil Nadu
Website: www.annauniv.edu

3. Year of establishment of the Institution : 2009

4. Type of the Institution:

University		Autonomous	
Deemed University		Affiliated	✓
Government Aided			

5. Ownership Status

Central Government		Trust	✓
State Government		Society	

Government Aided		Section 25 Company	
Self-financing		Any Other (Please Specify)	

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location
Malankara Catholic College	1998	30	Kaliakkavilai, Kanyakumari District, Tamil Nadu
Mar Chrysostom College of Education	2006	1	Kirathoor, Kanyakumari District, Tamil Nadu
Kanyakumari Community College	1997	3	Mariagiri, Kanyakumari District, Tamil Nadu

7. Details of all the programs being offered by the institution under consideration

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial intake	Intake increase	Current intake	Accreditation status	From	To	Program for consideration	Program for Duration
B.E Civil Engineering	UG	2009	2009	60	Yes	120	Applying first time	--	-	Yes	4
B.E Mechanical Engineering	UG	2009	2009	60	Yes	120	Applying first time	-	-	Yes	4

B.E Compute Science Engineering	UG	2009	2009	60	No	60	Applying first time	-	-	Yes	4
B.E Electronics & Communication Engineering	UG	2009	2009	60	Yes	120	Not Eligible	-	-	No	4
B.E Electrical & Electronics Engineering	UG	2012	2012	60	No	60	Not Eligible	-	-	No	4
M.E Computer Science and Engineering	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2
M.E Applied Electronics	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2
M.E Manufacturing Engineering	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2

Sanctioned Intake for Last Five Years for the B.E Mechanical Engineering	
Academic Year	Sanctioned Intake
2020-21	120
2019-20	120
2018-19	120
2017-18	120
2016-17	120

8. Programs to be considered for Accreditation vide this application:

SNo	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Mechanical Engg.

9. Total number of employees in the institution

A. Regular Employees (Faculty and Staff)

	2020-21	2019-20	2018-19
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Items	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering(Male)	62	62	59	59	60	60
Faculty in Engineering(Female)	35	35	31	31	33	33
Faculty in Maths, Science & Humanities (Male)	2	2	6	6	5	5
Faculty in Maths, Science & Humanities (FeMale)	19	19	25	25	27	27
Non-teaching staff (Male)	27	27	27	27	28	28
Non-teaching staff (FeMale)	20	20	21	21	21	21

B. Contractual Employees (Faculty and Staff)

Items	2020-21		2019-20		2018-19	
	MIN	MAX	MIN	MAX	MIN	MAX
FacultyinEngineering(Male)	-	-	-	-	-	-
FacultyinEngineering(Female)	-	-	-	-	-	-
Faculty in Maths, Science & Humanities(Male)	-	-	-	-	-	-
Faculty in Maths, Science & Humanities (Female)	-	-	-	-	-	-
Non-teaching staff (Male)	-	-	-	-	-	-
Non-teaching staff (Female)	-	-	-	-	-	-

10. Total number of Engineering Students

EngineeringandTechnology-UG

Items	2020-21	2019-20	2018-19
Total no.of Boys	832	976	1094
Total no.of Girls	229	241	258
Total	1061	1217	1352

Engineering and Technology-PG

Items	2020-21	2019-20	2018-19
Totalno.ofBoys	21	26	32

Totalno.of Girls	25	37	43
Total	46	63	75

11. Vision of the Institution

AworldclassMalankarainstitutionofhigherlearningrenownedforitsexcellenceinscienceandtechnology,and for its commitment to the holistic development of the individuals and society.

12. Mission of the Institution

To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement.

13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

- i) Name : Dr.A Lenin Fred
- Designation : Principal
- Mobile No : 9443483072
- Email id : leninfred.a@gmail.com

- ii) NBA coordinator, if designated:
- Name : Dr.AnandRejilin
- Designation : Professor / Head, Civil Engineering
- Mobile No : 9944468703
- Email id : rej.anand@gmail.com

PART B: Criteria Summary

Name of the program: B.E. Mechanical Engineering

Criteria No.	Criteria	Mark/Weightage
Program Level Criteria		
1.	Vision, Mission and Program Educational Objectives	60
3.	Course Outcomes and Program Outcomes	120
4.	Students' Performance	150
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	50
Institute Level Criteria		
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
	Total	1000

CRITERIA 1	Vision, Mission and Program Educational Objectives	60
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1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

1.1. State the Vision and Mission of the Department and Institute (5)

Institute Vision
A world class Malankara institution of higher learning renowned for its excellence in Science and Technology and for its commitment to the holistic development of the individual and Society.
Institute Mission
To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement..

Department Vision
To be a centre for excellence and to produce globally competent innovative and socially responsible Mechanical Engineering professionals

Department Mission	
M1	To provide excellent teaching learning ambience to impart quality education
M2	To inculcate the student's ethical values, leadership qualities, communication skills, teamwork and continuous learning
M3	To promote Research, innovation and entrepreneurship for socio-economic development

1.2. State the Program Educational Objectives (PEOs) (5)

PEO 1	Graduates will have a successful professional career in organizations around the world addressing the most challenging problems of design, manufacturing and allied engineering sectors
PEO 2	Graduates will be involved in life-long learning and professional development through modern engineering tools, continuous education, research and development in science, engineering and technology
PEO 3	Graduates will exhibit professional ethics, managerial and leadership capabilities that support economic development of the firms as well as the society

1.3. Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

Table1.3 (a): Published details of Vision, Mission and PEOs

Internal Stake holders	Area where Published
Management	Website,Program Invitations,Department Magazine,Newsletter
Governing Board Members	Website,Program Invitations,DepartmentMagazine, News letter
Faculty	Website,DepartmentMagazine,Newsletters,ProminentlocationsofDepartment,DepartmentNotice Boards and Course file
SupportingStaff	Website,DepartmentMagazine,Newsletters,ProminentlocationsofDepartment,DepartmentNotice Boards and Printed stationaries
Students	Website,DepartmentMagazine,Newsletters,Laboratorymanuals,Records, ProminentlocationsofDepartment,Department Notice Boards, HoD Room, prospectus and Intimation letter

Table1.3 (b): Published details of Vision, Mission and PEOs

External Stake holders	Area where Published
Employers	Website, e-mail, Newsletter
Industry	Website, e-mail, Newsletter
Alumni	Website, e-mail, Newsletter
Funding Agencies	Website, e-mail
Parents	Website, e-mail, Prospectus, Program Invitations, Department Magazine

Process for dissemination of the vision and mission of the department and PEOs of the program

Table1.3(c): Process for dissemination

Dissemination Methods	Target Stakeholders	
	Internal Stakeholder	External Stakeholder
Department Induction Speech By HoD	Students and Staff	-
Alumni Meeting	Management, Faculty, Supporting staff	Alumni
PTA Meeting	Management, Faculty, Supporting staff	Parents
Technical Events	Management, Faculty, Supporting staff, Students	Industry

1.4. State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

A. Process for defining the Vision and Mission of the Department

The Department vision is framed by Program Assessment Committee (PAC) in consultation with external and internal stakeholders. The mission to achieve the vision is then framed by the department PAC. The process is shown below

- ° The rural background of the students is considered in formulating the Department mission statement.
- ° Fundamentals to adapt new technologies, communication, managerial skills with ethical values and Hands on experience are taken into account while formulating the mission.
- ° The brainstorming session with faculty & students is held and a preliminary version of vision & mission statement is prepared.
- ° The preliminary version is communicated to the stakeholders and inputs/ suggestions for enhancement is obtained to formulate the next version of vision & mission.
- ° The formulated vision & mission is discussed in the program assessment committee (PAC) consisting of internal and external stakeholders in which the department vision & mission is framed.
- ° Department specific vision and mission is framed in line with the vision and mission of the institute.

- The Program Assessment Committee formulates the Department Vision and Mission by following the above-mentioned steps. The formulated Department Vision and Mission is forwarded to the Academic Planning Council for approval.

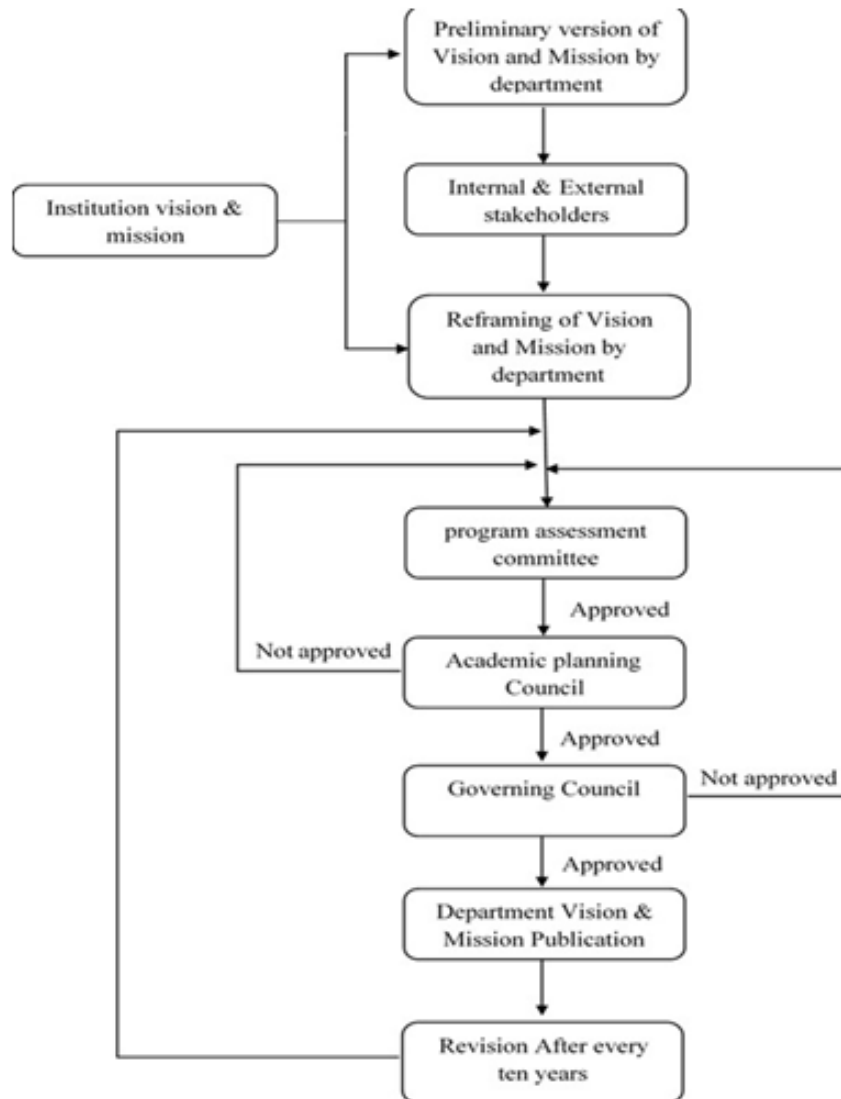


Figure1.4 (a): Process for Establishing Vision and Mission

- If the framed Department Vision and Mission is found to be satisfied, the Academic Planning Council sends the same to the Governing Council for final approval. If the Academic Planning

- Council is not satisfied with the framed Department Vision and Mission, it is returned to the Program Assessment Committee for reframing.
- If the framed Department Vision and Mission is found to be satisfied, the Governing Council approves the same. If the Governing Council is not satisfied with the framed Department Vision and Mission, it is returned to the Program Assessment Committee for reframing.
- The approved Department Vision and Mission is Published by the department.
- The Department Vision and Mission is revised once in every ten years by fulfilling the above-mentioned strategies.

B. Process for defining the PEOs

The Program Educational Objectives are established through the brainstorming process involving all the stakeholders such as students, alumni, industry, faculties, and employers. The PEOs are established through the following process steps:

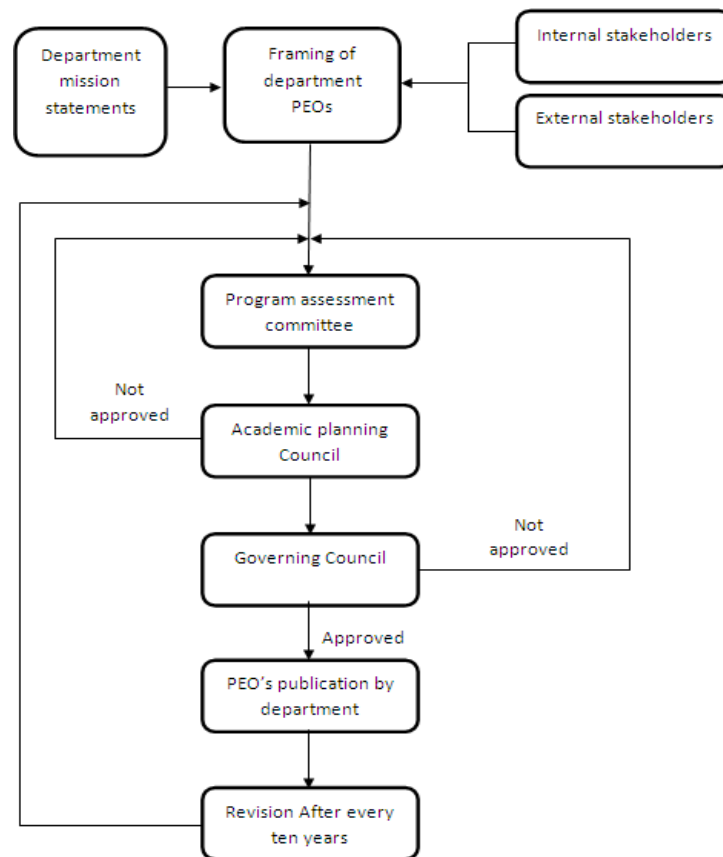


Figure 1.4 (b): Process for Establishing PEOs

- PEOs are framed in line with the Department mission statements.
- The brainstorming session with faculty & students is held and a preliminary version of PEOs statement is prepared.
- The preliminary version is communicated to the stakeholders and inputs/ suggestions for enhancement is obtained to formulate the next version of PEOs.
- The formulated PEOs are discussed in the program assessment committee (PAC) consisting of internal and external stakeholders in which the department PEOs are framed.
- The formulated PEOs are forwarded to the Academic Planning Council for approval.
- If the framed PEOs are found to be satisfied, the Academic Planning Council sends the same to the Governing Council for final approval. If the Academic Planning Council is not satisfied with the framed PEOs, it is returned to the Program Assessment Committee for reframing.
- If the framed PEOs are found to be satisfied, the Governing Council approves the same. If the Governing Council is not satisfied with the framed PEOs, it is returned to the Program Assessment Committee for reframing.
- The approved PEOs are published by the department.
- The PEOs are revised once in every ten years by fulfilling the above-mentioned strategies.

1.5. Establish consistency of PEOs with Mission of the Department (15)

The consistency between PEOs and the Department mission statement is established through mapping and is given in Table 1.5.(a). The justification of the correlation of PEOs with Department mission statements is given in Table 1.5.(b). The mission of the Department is reframed, then and there consistently in relation to the university curriculum and present trends.

Table1.5 (a): Mapping of PEOs with the Department mission

	M1	M2	M3
PEO	To provide excellent teaching learning ambience to impart quality education	To inculcate the student's ethical values, leadership qualities, communication skills, teamwork, and Continuous learning.	To promote Research, innovation and entrepreneurship for socioeconomic development.
PEO 1 – Graduates will have a successful professional career in organizations around the world addressing the most challenging problems of design, manufacturing, and allied engineering sectors.	3	2	2
PEO 2 - Graduates will involve in life-long learning and professional development through modern engineering tools, continuous education, research and development in science, engineering and technology	2	3	2
PEO 3 - Graduates will exhibit professional ethics, managerial and leadership capabilities that support economic development of firms as well as society	2	3	3

Table 1.5 (b): Correlation of PEOs with mission statements

PEO	Justification of the Department mission statement		
PEO 1	M1	3	Curriculum comprising of basic science, core, electives and projects Exposure to modern design and manufacturing tools Industrial visits Project works Internship
	M2	2	Soft Skill training programs Communication programs Workshops on Emerging technologies by Professional bodies and Industries
	M3	2	Entrepreneurship training programs Society based Pre-final and final year projects
PEO 2	M1	2	Training in high end softwares. Hands-on training on automobiles and drones
	M2	3	Value added courses Hands on workshops on Automobile Engineering Soft Skill training programs Training on communication skill Participation in co-curricular activities Academic projects
	M3	2	Entrepreneurship training Programs Innovative research projects
	M1	2	Dedicated course on Principles of Management and Total Quality Management Exposure to State of the art Engineering facilities
	M2	3	Training programs on professional ethics and responsibilities Dedicated course on principles of management. Mini and major Projects as team Placement training programs

PEO 3			Technical Seminar
	M3	3	Research projects on societal problems Entrepreneurship training programs Support for innovative start-ups

PEO Statements PEO Statements	M1	M2	M3
Graduates will have a successful professional career in organizations around the world addressing the most challenging problems of design, manufacturing and allied engineering sectors.	3	2	2
Graduates will be involved in life-long learning and professional development through modern engineering tools, continuous education, research and development in science, engineering and technology.	2	3	2
Graduates will exhibit professional ethics, managerial and leadership capabilities that support economic development of the firms as well as the society.	2	3	3

Criterion 2	Program Curriculum and Teaching – Learning Processes	120
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1. PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES

2.1. Program Curriculum (20)

2.1.1. State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes (POs) & Program Specific Outcomes(PSOs), mention the identified curricular gaps, if any (10)

A. Process used to identify extent of compliance of the University Curriculum for attaining the POs and PSOs

This Institute is affiliated to Anna University, Chennai and hence Mechanical Engineering department curriculum is framed by Anna University, Chennai. Curriculum includes Basic Science & Engineering, Humanities, Professional Courses, Core and Electives along with project works. The process to identify extent of compliance of the University curriculum is as follows:

- Before the start of every new regulation, the department will conduct the PAC meeting to identify the curricular gaps.
- The University curriculum is passed to the Program Assessment Committee (PAC).
- Suggestions from alumni, Industrial Experts, Employers and Faculty Members are taken into account.
- The possibilities related to the attainment of POs and PSOs are analysed by the committee members.
- The committee analyses and finalizes the curricular gaps.
- An action plan is formulated to fill the gaps.

Program Assessment Committee (PAC) Members

Mar Ephraem Members

Sl. No	Name	Designation	Department
1.	Prof. Dr. D. Rajeev	Professor & Head	MECH
2.	Prof. Dr. N. Austin	Professor	MECH
3.	Dr. M. John Irudhaya Raj	Assistant Professor	MECH
4.	Mr. P. Anto Paulin Merinto	Assistant Professor	MECH
5.	Mr. R. Leo Bright Singh	Assistant Professor	MECH
6.	Mr. S.Vijayakumar	Assistant Professor	MECH
7.	Mr. I Jackson Thanka Roy	Assistant Professor	MECH
8.	Dr.A.Seema	Assistant Professor	S&H

Alumni Members

Sl. No	Name	Batch	Current position
1.	Mr. Jaison Johnson	2009-2013	Managing Director, TISAT, Cochin.
2.	Mr. Albert Mathew	2010-2014	Senior Engineer, Sandhar Automotives, Gurgoan, Delhi.

Industry Experts

Sl. No	Name	Designation	Company
1.	Er. A. Ravindran	Regional Head	DCW, Tuticurin.
2.	Er. S.Sunil Kumar	Managing Director	Hyasun Engineering Projects Pvt Ltd., Chennai.

Employers

Sl.No	Name	Designation	Company
1.	Er. M. Muthu Maharajan	HR Manager	Parascadd, Mumbai.
2.	Er. N.Paul Singh	Manager	Necco Tools, Chennai.

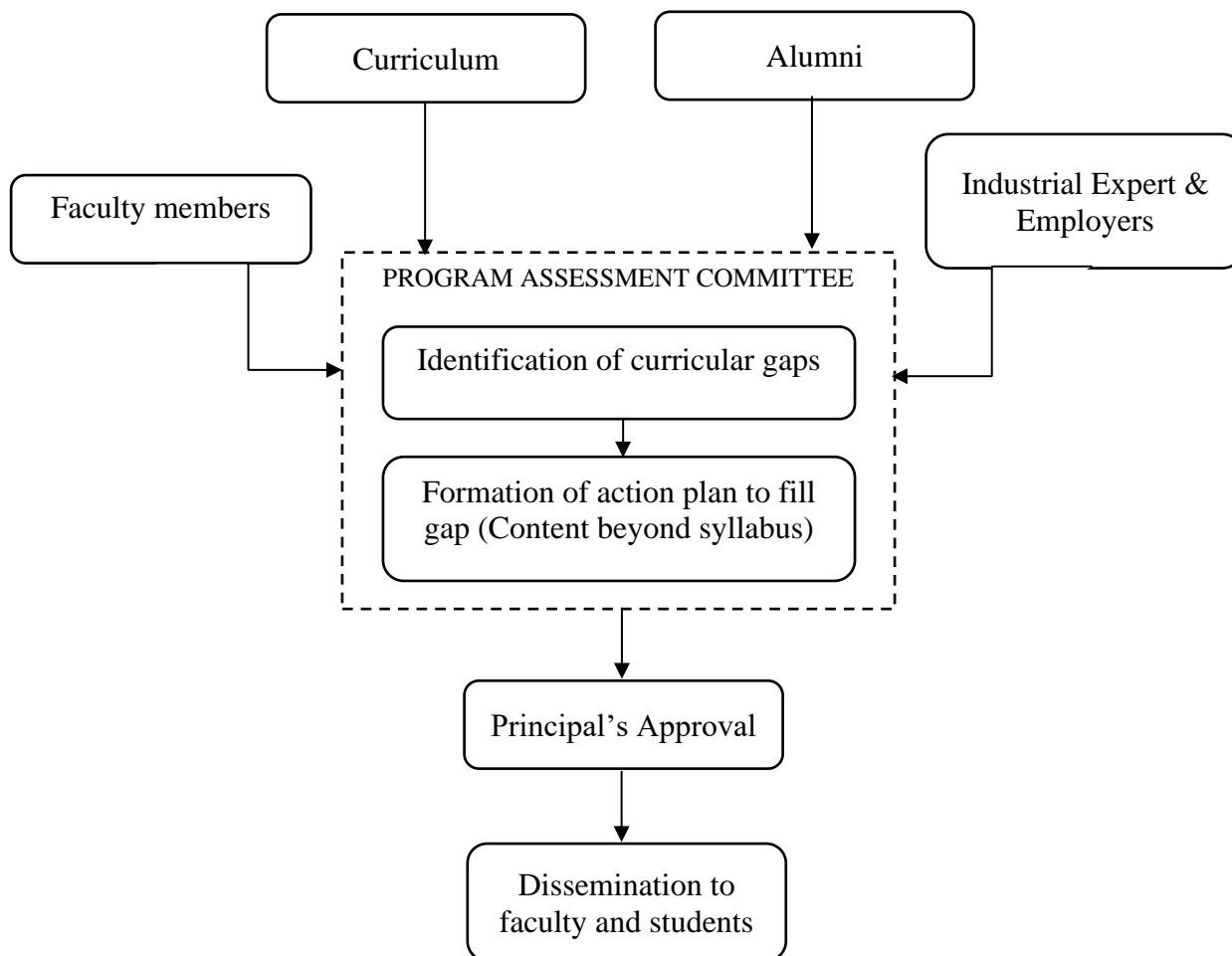


Figure. 2.1.1. The process to identify extent of compliance of the University curriculum

B. List the curricular gaps for the attainment of defined POs & PSOs

Sl. No	Course code	Name of the Course	Curricular Gaps
1.	ME 6301	Engineering Thermodynamics	Quantum thermodynamics.
2.	CE 6451	Fluid Mechanics and Machinery	Computational fluid dynamics.
3.	ME 6402	Manufacturing Engineering II	Advance metal removal process
4.	ME 6403	Engineering Materials and Metallurgy	Smart materials and its application in automobile Engineering.
5.	ME 6501	Computer Aided Design	Modelling using high end software.
6.	ME 6502	Heat and Mass Transfer	CFD in industries.
7.	ME 6504	Metrology and Measurements	Computer aided inspection.
8.	ME6602	Automobile Engineering	Hands on practice in assembly and disassembly of two wheeler and four wheeler components.

9.	ME 6603	Finite Element Analysis	Finite element analysis in industry.
10.	GE 6563	Communication and soft Skills Laboratory	Soft skill training.
11.	ME 6701	Power Plant Engineering	Solar power systems and technologies - present and future.
12.	ME 6012	Maintenance Engineering	Advancement in industrial maintenance.

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs & PSOs (10)

A. Steps taken to get identified gaps included in the curriculum (e.g. letter to University / BOS)

The identified gaps are analysed by the PAC. The gaps are intimated to the University and are fulfilled by providing content beyond syllabus.

B. Delivery details of content beyond syllabus

The content beyond syllabus is delivered through the following methods.

- Additional Laboratory Experiments
- Guest Lectures
- Workshops/Seminars
- Value Added Course
- Training on Soft Skills

Sl. No	Course Title	Curricular Gaps	Delivery Methods
1.	Engineering Thermodynamics	Quantum Thermodynamics	Seminar
2.	Fluid Mechanics and Machinery	Submersible Pumps	Guest Lecture
3.	Manufacturing Engineering II	Advanced Metal Removal Process	Additional Laboratory Experiments
4.	Engineering Materials and Metallurgy	Smart materials and its application in automobile Engineering.	Seminar
5.	Computer Aided Design	Modelling using high end software.	Value Added Course
6.	Heat and Mass Transfer	Computational fluid dynamics	Workshop
7.	Metrology and Measurements	Computer aided inspection	Seminar
8.	Finite Element Analysis	Finite element application in industry.	Guest Lecture

9.	Automobile Engineering	Hands on training in dismantling and assembling of two wheeler and four wheeler components.	Workshop
10.	Communication and soft Skills Laboratory	Soft skill training	Soft Skill Training
11.	Power Plant Engineering	Solar power systems and technologies - present and future	Guest Lecture
12.	Maintenance Engineering	Advancement in industrial maintenance.	Guest Lecture

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs & PSOs

CAY (2019-2020)

Sl. No	Identified gap	Action taken	Date-month-year	Resource person with designation	% of students	Relevance to	
						POs	PSOs
1.	Quantum thermodynamics	Seminar	16.08.2019	Dr. N. Austin, Professor, Mar Ephraem College of Engineering and Technology.	98	1, 2	1
2.	Submersible pumps	Seminar	06.09.2019	Mr. R. Leo Bright Singh, AP, Mar Ephraem College of Engineering and Technology.	96	1	-
3.	Advance metal removal process	Additional laboratory experiments	06.01.2020	Mr. Manoj M, AP, Mar Ephraem College of Engineering and Technology.	94	1, 9	3
4.	Smart materials and its application in automobile Engineering.	Seminar	30.01.2020	Mr. C. Gigin Durai, AP, Mar Ephraem College of Engineering and Technology.	92	1	3
5.	Modelling using high end software	Value added course	03.02.2020	Er. K. Aniruthan, Center Head, CADD Center, Marthandam.	94	5,10	2
6.	Computational fluid dynamics	Workshop	20.09.2020	Dr.S Joseph Sekhar and Team, St. Xavier's	96	1, 5	1

				Catholic College of Engineering			
7.	Computer aided inspection	Seminar	01.10.2020	Mr. P. Anto Pauline Merinto, AP, Mar Ephraem College of Engineering and Technology.	94	1	3
8.	Finite element application in industry.	Guest lecture	21.01.2020	Er. I. Mandela, Design Engineer, Green Views Piping Solutions, Chennai.	96	1	2
9.	Hands on training in dismantling and assembling of two wheeler and four wheeler components.	Workshop	27.02.2020	Athen Bajaj, Nagercoil, G.G Maruti Guides	94	1, 9	1
10.	Communication skills.	Soft skill training	04.03.2020	Mr. R.S. Vinoth, AP, Mar Ephraem College of Engineering and Technology.	96	10	-
11.	Solar power systems and technologies - present and future	Guest lecture	24.07.2019	Dr.T.A. Siva Kumar, Ponjesly College of Engineering, Naagercoil.	98	1, 7	1
12.	Advancement in industrial maintenance.	Guest lecture	05.10.2019	Mr. S. Vijayakumar, AP, Mar Ephraem College of Engineering and Technology.	96	1, 9	1

CAY m1 (2018-2019)

Sl. No	Identified gap	Action taken	Date-month-year	Resource person with designation	% of students	Relevance to	
						POs	PSOs
1.	Modelling using high end software.	Value Added Course	29.08.2018	Er. K. Aniruthan, Centre Head, CADD Centre, Marthandam.	96	5,10, 12	2
2.	Computational fluid dynamics	Workshop	12.2.2019 to	Dr.S. Joseph Sekhar and Team,	95	1, 5	1

			18.2.2019	St. Xavier's Catholic College of Engineering, Nagercoil.			
3.	Computer aided inspection	Seminar	10.09.2018	Mr. P. Anto Paulin Merinto, AP, Mar Ephraem College of Engineering and Technology.	94	1	3
4.	Finite element application in industry.	Guest Lecture	28.01.2019	Er.I. Mandela, Design Engineer, Green Views Piping Solutions, Chennai.	97	1	2
5.	Hands on training in dismantling and assembling of two-wheeler and four wheeler components.	Workshop	28.02.2019 & 01.03.2019	Athen Bajaj, Nagercoil	95	1, 9	1
6.	Communication skills.	Soft skill training	05.02.2019	Mr. R.S. Vinoth, AP, Mar Ephraem College of Engineering and Technology.	94	10	-
7.	Solar power systems and technologies - present and future	Guest lecture	11.07.2018	Dr. T.A. Siva Kumar, Amirtha College of Engineering & Technology.	96	1, 7	1
8.	Advancement in industrial maintenance.	Guest lecture	08.10.2018	Mr. S. Vijayakumar, AP, Mar Ephraem College of Engineering and Technology.	94	1, 9	1

CAYm2 (2017-2018)

Sl. No	Identified gap	Action taken	Date-month-year	Resource person with designation	% of students	Relevance to	
						POs	PSOs
1.	Quantum thermodynamics	Seminar	07.08.2017	Dr. N. Austin, Professor, Mar Ephraem College of Engineering and Technology.	98	1, 2	1
2.	Submersible pumps	Seminar	28.08.2017	Mr. R. Leo Bright Singh, AP, Mar Ephraem College of Engineering and Technology.	96	1	-
3.	Advance metal removal process	Additional laboratory experiments	12.01.2018	Mr. Manoj M, AP, Mar Ephraem College of Engineering and Technology.	94	1, 9	3
4.	Smart materials and its application in automobile Engineering.	Seminar	20.02.2018	Mr. Lalu Gladson Robin, AP, Mar Ephraem College of Engineering and Technology.	92	1	3
5.	Modelling using high end software.	Value Added Course	05.01.2018	Er. K. Aniruthan, Centre Head, CADD Centre, Marthandam.	94	5,10, 12	2
6.	Computational fluid dynamics	Workshop	21.8.2017	Dr.S Joseph Sekhar and Team, St. Xavier's Catholic College of Engineering, Nagercoil.	96	1, 5	1
7.	Computer aided inspection	Seminar	11.09.2017	Mr. P. Anto Pauline Merinto, AP, Mar Ephraem College of Engineering and Technology.	94	1	3
8.	Finite element application in industry.	Guest lecture	22.01.2018	Er. I. Mandela, Design Engineer, Green Views	96	1	2

				Piping Solutions, Chennai.			
9.	Hands on training in dismantling and assembling of two wheeler and four wheeler components.	Workshop	24.03.2018	Athen Bajaj, Nagercoil and G.G Maruti Guides, Marthandam.	94	1, 9	1
10.	Communication skills.	Soft skill training	02.02.2018	Mr. R.S. Vinoth, AP, Mar Ephraem College of Engineering and Technology.	96	10	-
11.	Solar power systems and technologies - present and future	Guest lecture	05.10.2017	Dr.T.A. Siva Kumar, Amirtha College of Engineering & Technology.	98	1, 7	1
12.	Advancement in industrial maintenance.	Guest lecture	24.07.2017	Mr. S. Vijayakumar, AP, Mar Ephraem College of Engineering and Technology.	96	1, 9	1

2.2 Teaching Learning Processes

(100)

2.2.1 Describe processes followed to improve quality of Teaching & Learning

(25)

The department follows various practices for the attainment of Program outcomes and program specific outcomes in acquiescence with university curriculum:

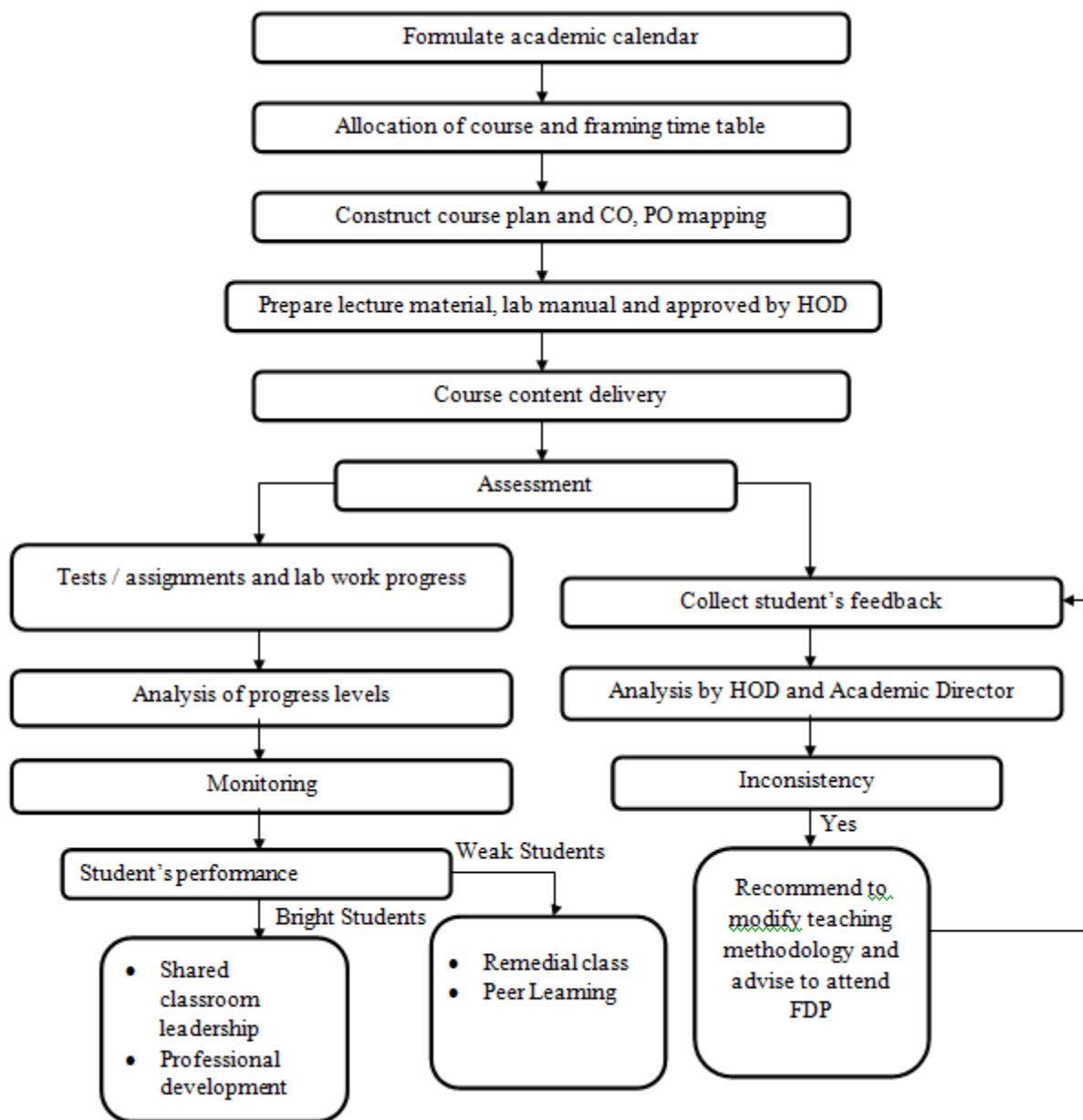


Figure 2.2.1 (a) Teaching Learning Processes

2.2.1 A. Adherence to Academic Calendar

The department academic calendar is prepared and published every semester in advance by the department in accordance with the university academic schedule and institute calendar. The activities include

1. Class committee meetings.
2. Professional society activity.
3. Internal assessment schedule.
4. Industrial visit.
5. Internship.
6. Syllabus coverage schedule.
7. Technical events.
8. Project review schedule.
9. Academic audit.

2.2.1 B. Use of various Instructional Methods and Pedagogical Initiatives:

Table 2.2.1 (a): Instructional Methods and Pedagogical Initiatives

Sl.No.	Instructional Methods and Pedagogical Initiatives	Description
1.	Class room lectures	Real world examples, tutorials and assignments are given to the students. To ensure effectiveness of teaching, the class rooms are equipped with projectors.
2.	ICT	Enable teachers to increase the quality of teaching material and visuals.
3.	Hands-on experience	Demonstrations by allotting extra lab classes.
4.	Tutorials/ Quiz	To assess the performance of students, tutorials and quiz are being conducted.
5.	PEER Learning	Group learning system-Combining weak students with the bright students.
6.	Adjunct/ visiting faculty	Enrich the students in current industrial trends and provide project guidance.
7.	Mini projects	To strengthen the learned concepts, mini projects are done by the students. Students exhibit their projects and working models in technical events.
8.	Industrial Visit / Internship	Students are encouraged to undergo internship programs and industrial visits in reputed companies.
9.	Flipped classroom	To improve the presentation and communication skill, students are motivated to take classes on recent trends.

2.2.1 C. Methodologies to Support Weak Students and Encourage Bright Students:

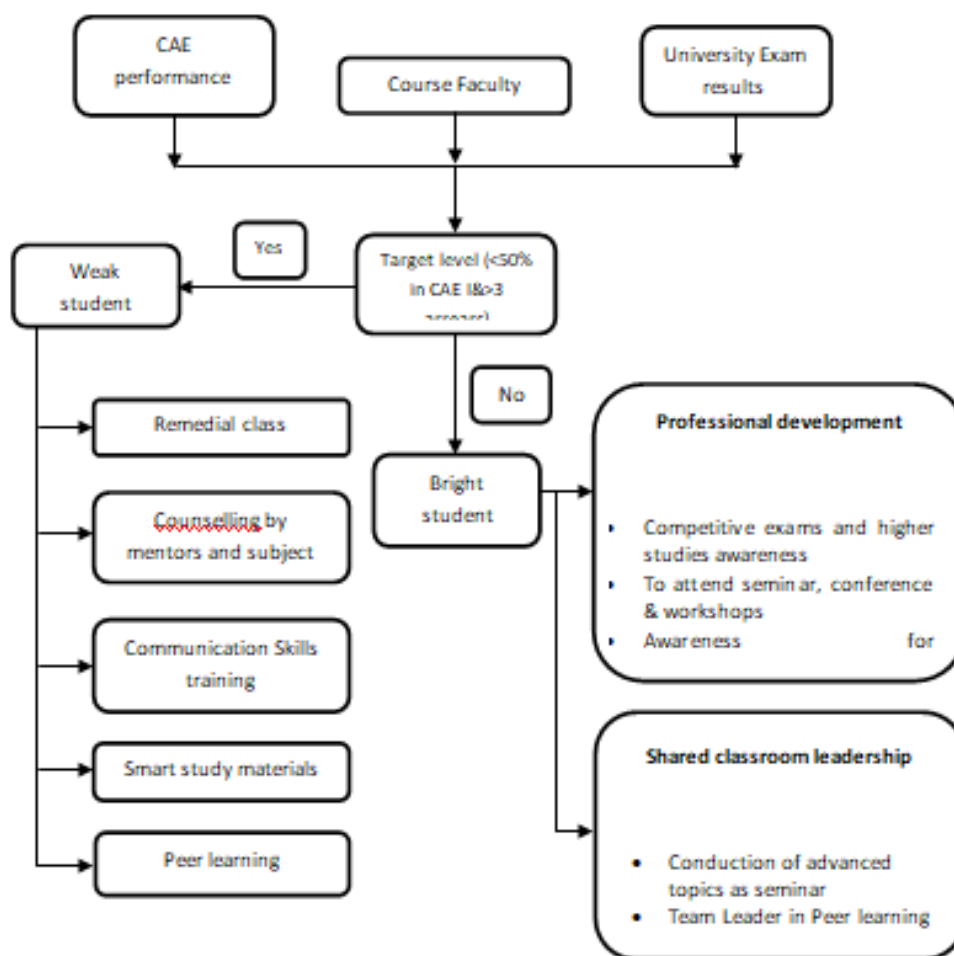


Figure 2.2.1 (b): Methodology to Support Weak Students and Encouraging Bright Students

Weak students are identified based on University results and internal marks.

Strategy to identify weak students

- University Exam GPA
- Continuous Assessment Exam Marks
- The students fall under weak students category are:
 - Students secured less than 50% of marks in CAE 1.
 - Students having more than 3 arrears in the University Exams.

Actions taken to support weak students

Peer Learning

- The department establishes peer group by forming groups of 4 to 6 students with one bright student as leader who supports the weak students.
- The faculty members will be available as facilitator to the peer learning groups. The pairing of bright students and weak students results in better academic performance.

Remedial classes

- Special classes for weak students after regular classes using simple and smart study material.
- Proper Counselling is given to weak students by mentors and subject experts.
- For students from rural background, special communication skill classes are conducted.

Actions taken to encourage bright students

Shared classroom leadership

- Seminar sessions on advance topics are led by bright students which in turn enhance soft skills and improve subject knowledge
- Team Leader in Peer learning - Bright students act as leaders in peer groups which will enhance their leadership skills.

Professional development

- Awareness of competitive exams, entrepreneurship and higher studies are given to the students
- Encouraged to attend conference, seminars, workshops & paper presentation.
- Motivation and company specific trainings are provided to the students by arranging interactive sessions with the alumni and delegates from various companies.
- Class toppers are honoured in department symposium and in the annual day celebrations.

D. Quality of Class room teaching:

- The class starts with discussion of learning outcomes and relevant RBT.
- A recap of previous lecture and necessary prerequisite knowledge is discussed.
- Brief background information of the topic is also given.
- Faculty use traditional chalk and board method and also use other methodologies like power point presentations for better understanding of the course.
- Innovative methods like explaining with the help of models, animations, charts, real time analogies and brain storming are made, to make the class room teaching more interactive and interesting.
- Tutorial classes are conducted for analytical courses, where students from a class are divided into number of peer learning groups.
- Industrial application of the topic is also explained.
- GATE questions are discussed in the classrooms.
- NPTEL materials and contents are also included in classroom teaching.
- Summary of the lecture is discussed by a read-through of topics covered.

E. Conduct of Laboratory Experiments:

- Faculty prepare laboratory manual well ahead of the semester which includes Do's and Don'ts of the laboratory, list of experiments, the procedure on how the experiments are to be done and sample calculations.
- All the experiments are carried out based on the relevant codes and guidelines.
- Faculty test runs the experiments before starting of the semester and makes a record in laboratory manual which helps in offering constructive suggestions to the students.
- Groups are formed depending on the equipment/experiment for effectiveness.
- Separate lab attendance cum assessment record is maintained for every laboratory.
- The dates of the experiments, observation correction, record submission and evaluation are registered carefully in the assessment record.

F. Continuous Assessment in Laboratory:

- The students maintain an observation and record of all the experiments done in the laboratory.
- The observations and records are evaluated based on laboratory assessment rubrics on weekly basis and the completion within the stipulated time is ensured.
- Model exams are conducted at the completion of laboratory course.
- Internal Marks will be awarded based on the assessment of all the experiments and model exam.

The scheme of marks awarded is based on the following rubrics:

Table: 2.2.1 (b): Laboratory Assessment Rubrics

Parameters	Excellent (5)	Good (3-4)	Average (2)
Ability to conduct experiment	<ul style="list-style-type: none">● Excellent knowledge on operation procedure.● No help needed from Faculty.● Observations of measurements are accurate and precise.● Excellent team player with leadership qualities.● Follows standard/Safety procedures.	<ul style="list-style-type: none">● Good knowledge on operation procedure.● Minor help needed from Faculty.● Observations of measurements are accurate.● Good team player.● Follows standard/Safety procedures.● Adopts proper clean up procedures when remained.	<ul style="list-style-type: none">● Fair knowledge on operation procedure.● Major help needed from faculty.● Observations of measurements are less accurate.● Not a team player.● Partially follows standard/Safety procedures.● Adopts proper clean up procedures when remained.

	<ul style="list-style-type: none"> Adopts proper clean up procedures. 		
Interpret the result and conclusion	<ul style="list-style-type: none"> Can do the Calculations independently. Can analyze and interpret experimental results. Compare theory against experiment and calculate related errors correctly. Makes valid conclusions. 	<ul style="list-style-type: none"> Can do the calculations with peer help. Can interpret experimental results. Compare theory against experiment and calculate related errors correctly with the help of faculty. Makes valid conclusions with the help of faculty. 	<ul style="list-style-type: none"> Can do the calculations with the help of faculty. Cannot interpret experimental results. Cannot compare theory against experiment and calculate related errors correctly. Does not make valid conclusions with the help of faculty.
Record Preparation	<ul style="list-style-type: none"> Organized and excellent presentation of experiments. All technical details are available. 	<ul style="list-style-type: none"> Organized and good presentation of experiments. Some technical details are available. 	<ul style="list-style-type: none"> Disorganized and poor presentation of experiments. Technical details are not available.
Submission	<ul style="list-style-type: none"> Submission of observation and record on time. Submission of observation and record in its entirety. 	<ul style="list-style-type: none"> Submission of observation and record with some delay. Submission of observation and record in its entirety. 	<ul style="list-style-type: none"> Late Submission of observation and record. Incomplete Submission of observation and record.

G. Students Feedback on teaching learning process and Action Taken:

1. Centralized online student feedback System:

The faculty members are evaluated through the online feedback system on their teaching and learning process twice (After CAE I & CAE II) in every semester. The consolidated feedback is generated by the head of the department and submitted to IQAC and the consolidated department report is forwarded to academic director. The report is analysed by the academic director along with the HOD. Necessary suggestions are given to the faculty for improvement and the report is submitted to the Principal.

Course Feedback Report - Mech - OIM552 - Lean Manufacturing

Name of the Course Instructor	: GIGIN DURAI C	Course Code/Title	: OIM552 / Lean Manufacturing
Name of the Department	: Mech	Programme	: UG
Year	: Third Year	Academic Year	: 2019 - 2020
Semester	: Fifth Semester	Section	: B
Total Students	: 63	Total Students Participated	: 61
Students % (Participated)	: 96.83 %	Feedback	: Feedback - I

SINo	Parameters	Score 10 Max
1	Availability of faculty 2 minutes prior to the commencement of each class	8.05
2	Audibility of faculty's Voice and Teachers control over class	7.74
3	Capability of communicating in English	7.79
4	Initiatives taken for slow learners through remedial classes and advanced learners through training of competitive examination/ placement questions.	7.61
5	Coverage of syllabus and additional contents within given time.	7.92
6	Providing inspiration and positive energy to students.	7.85
7	Applicability/relevance to real life situations and integration of content with other courses.	7.84
8	Reference of other books, journals, magazines and NPTEL videos in class.	7.67
9	Clarifying doubts inside and outside classroom.	7.8
10	Ability to use digital technology devices in classroom.	7.62
11	Involving students during lecture through interactions.	7.89
12	Addition of relevant topics required for Industries (Content Beyond Syllabus) and sharing current technologies and updates in class.	7.93
13	Ability to design quiz/test/mini project/assignments/self learning content /industrial visits to evaluate students understanding.	7.97
Average Marks		7.82



Corrective action planned		
1.	Instructed to use more PPT's & other digital technology	 Approved By
2.		
3.		
Date	24/8/19	Proposed by : HOD
		Academic Director
Verification of Corrective action		
1.	Verified his PPT usage in classroom	 Verified By
2.		
3.		
Date	5/9/19	HOD

Figure: 2.2.1 (c): Sample of students feedback

2. Class committee meeting.

- Every class shall have a class committee consisting of teachers of the class concerned, student representatives and a chairperson who is not teaching the class.
- The class committee is constituted by the Head of the Department.
- The Chairperson of the class committee may invite the Class adviser(s) and the Head of the Department to the class committee meeting.
- The Head of the Institution may participate in any class committee of the institution.
- The class committee shall be constituted within the first week of each semester. At least 4 student representatives shall be included in the class committee.

- The first-class committee meeting is held within a week from the date of commencement of the semester. The students are informed about the University Curriculum, Academic calendar and weightage of assessments within the framework of the Regulations. Two subsequent meetings are held in a semester at suitable intervals.
- During these meetings the student members representing the entire class, shall interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.
- The functions of the class committee include
 - Solving problems experienced by students in the class room and in the laboratories.
 - Informing the student representatives about the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
 - Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
 - Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help/guidance to such weak students.
- The chairperson is required to prepare the minutes of every meeting, to submit the same to Academic Director and Head of the Institution within two days from execution of the meeting and to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management by the Head of the Institution.

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

2.2.2 A. Process for internal semester Question Paper Setting, Evaluation and effective process implementation (5)

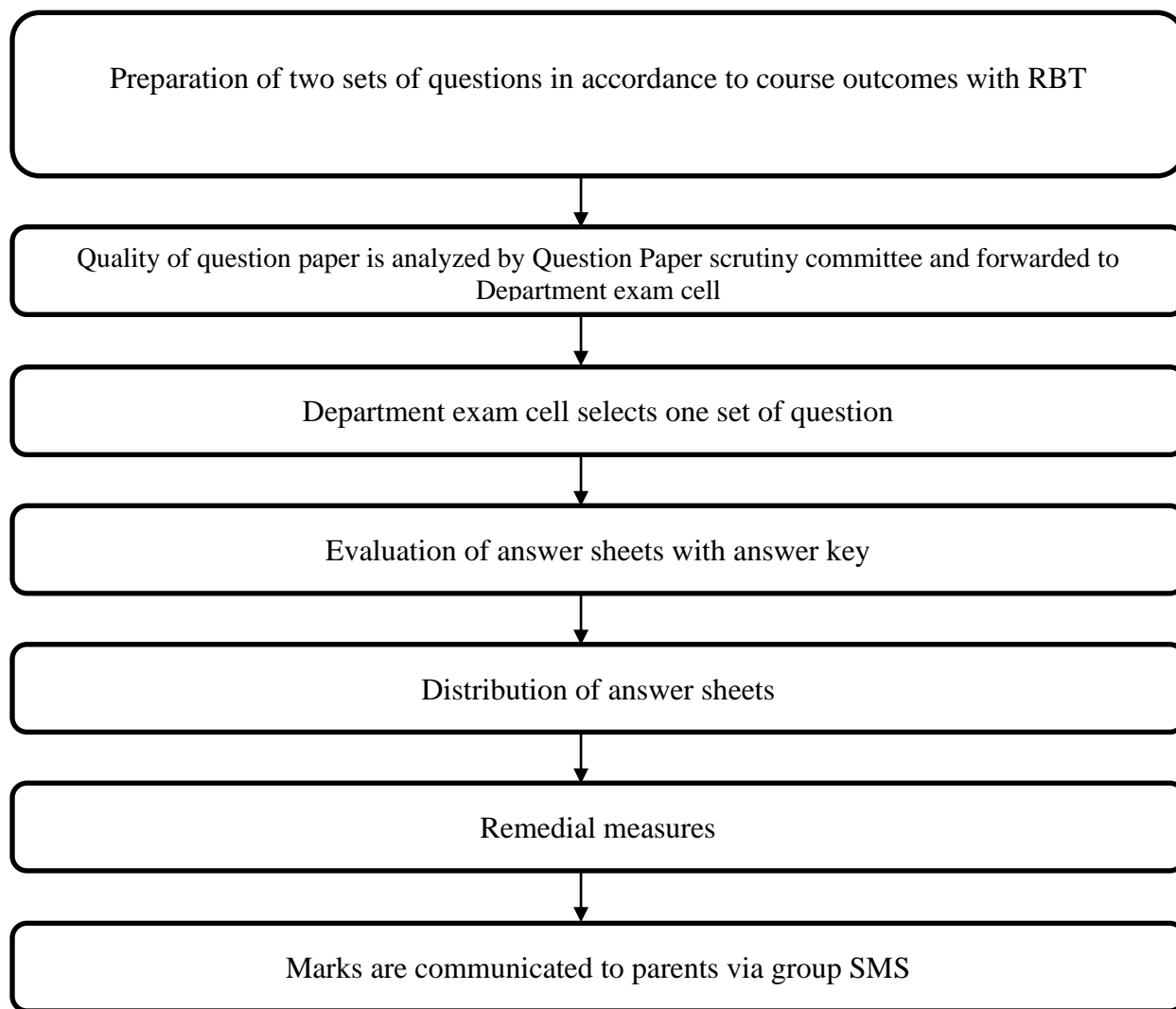


Figure. 2.2.2 (a): Process for internal Assessment

2.2.2 B. Process to ensure questions from outcomes/learning levels perspective

(5)

The Continuous Assessment Exams and Model exam are important tools for calculation of outcome attainment. The faculty members prepare the question papers considering outcome / learning levels perspective (Revised Bloom's Taxonomy). The HOD Constitutes a Question Paper scrutiny committee to ensure questions from outcomes/learning levels perspective.

The Constituents of Question Paper scrutiny committee:

- Senior faculty - Chairman
- Faculty (3Nos) – Members

The role of Question Paper scrutiny committee is to ensure the quality of question papers and coverage of COs. The Question Paper scrutiny committee accepts/recommends for modification and resubmission / rejects and resubmit.

2.2.2 C. Evidence of COs coverage in class test/ mid-term tests

(5)

- Course instructors set the questions considering different cognitive levels of learning and the coverage of COs.
- Cognitive levels (RBT) of questions are marked in the question paper. COs coverage of each question is specified in the question paper.
- The CAE 1 covers the portions with CO1 and CO2, the CAE 2 covers the portions with CO3 and CO4, the Model Exam covers the entire syllabus with all COs. After preparation of question paper by individual faculty members, the QP scrutiny committee will check for the CO coverage and approve the question paper.

Table. 2.2.2 (a): CO coverage pattern for class test/ mid-term tests

Internal exam/course outcome	CO1	CO2	CO3	CO4	CO5	CO6
CAE 1	√	√				
CAE 2			√	√		
Model Exam	√	√	√	√	√	√

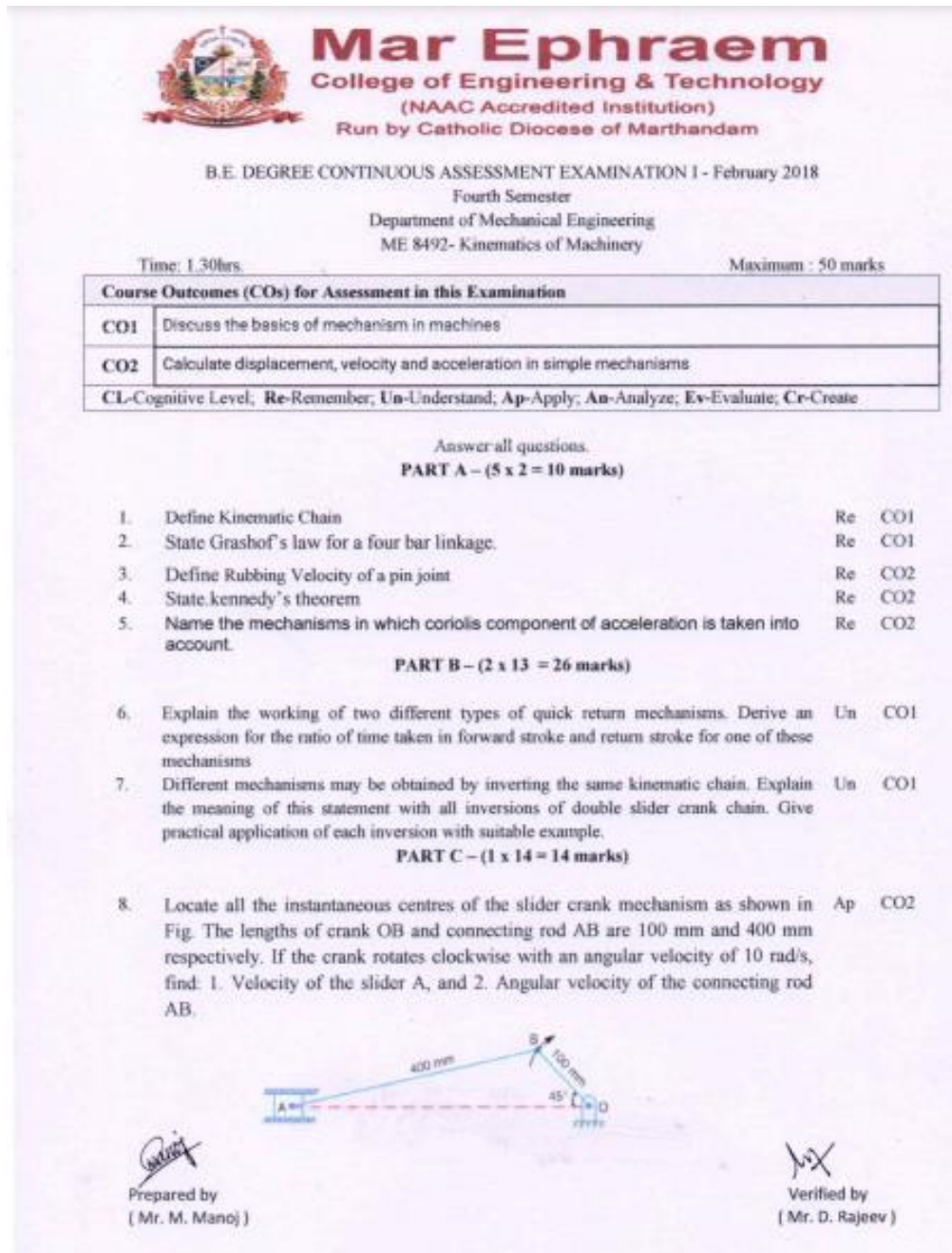


Figure. 2.2.2 (b): Question paper model

2.2.2 D. Quality of Assignment and its relevance to COs

(5)

- Assignments play an important role in the course plan.
- Assignments are used to gather extra information beyond the content taught in the class and to improve reading, problem-solving and writing skills of the students.
- Assignments are used to kindle the creativity of students.
- Assignments are mapped with COs and POs.

Assignment Evaluation Rubrics

Table 2.2.2 (b): Assignment Evaluation Rubrics

Parameter for Assessment	Excellent (16-20marks)	Good (11–15 marks)	Fair (06-10 marks)	Unsatisfactory (<=5 marks)
Application of Learned Concepts	Applied the learned concepts and Analyse the outcomes.	Applied the learned concepts	Tried to apply the learned concepts	Not Applied any learned Concepts
Reference of Resources	Referred more than 2 resources	Referred up to 2 resources	Referred one resource	has not referred any resource
Uniqueness of Content	Uniqueness > 90%	Uniqueness > 70-90%	Uniqueness > 40-70%	Uniqueness > 0-40%
Timely Submission	Submitted on time	Late submission with justification	Late submission without justification	Submitted very late without any explanation
Neatness of the Report	Very neat with charts, table, references as per the given instructions	Report is in satisfactory minor deviations from given instructions	Report is in satisfactory major deviations from given instructions	Instructions not followed

Relevance to CO

The assignment topic is based on CO. The Assignment 1 covers the portions with CO1 and CO2, the Assignment 2 covers the portions with CO3 and CO4, the Assignment 3 covers the portions with CO5 and CO6. The sample assignment CO coverage is given below:

Table. 2.2.2 (c): Relevance to CO

Assignment / course outcome	CO1	CO2	CO3	CO4	CO5	CO6
Assignment 1	√	√				
Assignment 2			√	√		
Assignment 3					√	√

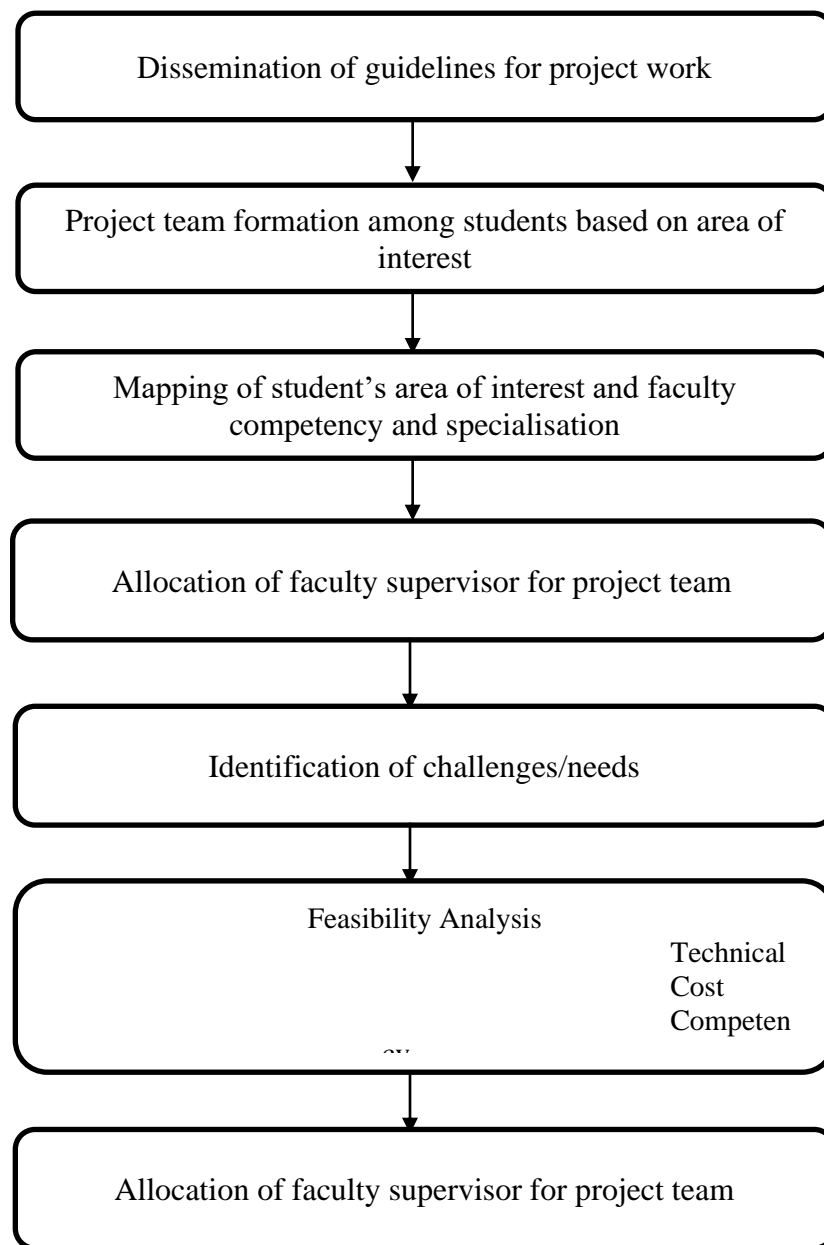
Content Sources for Assignments

The content for assignments is taken from the following tools which help the students for getting ideas and writing the assignments.

- Reference Books, Lectures
- Online Sources, Data Bases
- NPTEL Videos
- Articles in journals, Newspaper, News letter
- Conference or seminar papers in published proceedings – Print / online
- Dictionary / Encyclopaedia – Print / online

Feedback on Assignments

- The assignment is evaluated based on the rubrics and discussed with the student about the depth of the assignment topic and the criticisms were given about the approach to the topic.
- The number of references collected is viewed and the conclusion / inferences from the topic of assignment are verified.
- The improvement needed for the assignment is intimated to the student for uplifting the self-learning capability of the student for further assignment works.

A. Identification of projects and allocation methodology to faculty members**Figure 2.2.3 (a): Identification of projects and allocation methodology****Dissemination of guidelines:**

At the beginning of the academic year, project coordinator responsibility is assigned to one/two faculty in the department. The project coordinator will explain the guidelines of the University Project Works and general rules to be followed.

Project team formation:

The students are given the autonomy to choose their own team members based on the area of interest with a maximum of four students per batch.

Mapping of student's area of interest and the faculty competency:

The area of interest of faculty members is displayed in the department notice board and the students can opt to select their supervisor based on their area of interest and the faculty competency.

Allocation of faculty supervisor for project team:

Project supervisors are allocated by the project coordinator in consultation with HOD.

Identification of challenges/needs:

The student selects the challenges from their area of interest based on the need of the society.

Feasibility Analysis:

The student analyses the feasibility of the project to address the identified challenge in terms of cost, technology and competency.

Confirmation of project:

The students confirm the identified project with the project supervisors.

Project Mark Allocation:

The project report shall carry a maximum of 30 marks. The project report shall be submitted as per the approved format. Same mark shall be awarded to every student within the project group for the project report. The viva- voce examination shall carry 50 marks. Marks are awarded to each student of the project group based on the individual performance in the viva-voce examination.

Table: 2.2.3 (a): Project Mark Allocation

Review I	Review II	Review III	End semester Examinations				
			Thesis Submission (30)		Viva-Voce (50)		
5	7.5	7.5	Internal	External	Internal	External	Supervisor
			15	15	15	20	15

B1. Types of projects

Students with the guidance of the supervisors undertake projects in research, product development and applied Engineering.

Table 2.2.3 (b): Number of projects implemented in research, product development and application areas

Sl. No.	Year	Type	Number of Projects
1.	CAY 2019-2020	Research	23
		Product development	2
		Application	6
2.	CAY m1 2018-2019	Research	14
		Product development	2
		Application	16
3.	CAY m2 2017-2018	Research	11
		Product development	4
		Application	19

B2. Contribution of project work towards attainment of POs

- Students apply the knowledge gained in the theoretical and practical courses in the implementation of the project; this contributes to the attainment of PO1.
- Students do literature surveys in the area of their project to analyze their topic and identify new problems; this contributes to the attainment of PO2.
- Students with the help of supervisor plan and design solutions for the identified problems; this contributes to the attainment of PO3 and PO4.
- Students are motivated to do projects which are useful to the society; this contributes to the attainment of PO3 and PO6.
- Research methodologies are adopted by the students in their projects; this contributes to the attainment of PO4.
- In the implementation of projects, students use modern tools/components and software for designing which are not learned in the curriculum; this contributes to the attainment of PO5.
- Socio economic impact is given due weightage in the project evaluation rubrics, this contributes to the attainment of PO7.
- Students apply ethical principles and avoid plagiarism in their projects; this contributes to the attainment of PO8.
- Maximum of four students are permitted in a project batch, working in a team allows them to learn and adjust with the team as an individual member and leader; this contributes to the attainment of PO9 and PO11.
- Three reviews make the students to prepare presentation slides and for oral presentation of their progress in the project work; this contributes to the attainment of PO10.
- During reviews, students prepare and submit an abstract of the presentation. Students prepare a report based on the guidelines provided by the university. These contribute to the attainment of PO10.
- Doing project work as a team and managing the finance related to the project work contribute to the attainment of PO11.
- The work knowledge and interest gained from the project work ignite the students to learn more; this contributes to the attainment of PO12.

Table 2.2.3 (c): A few projects and their relevance to POs and PSOs**CAY (2019-2020)**

Sl. No.	Project Title	Project type	Relevance to POs	Relevance to PSOs
1.	Failure Analysis of connecting rod of diesel engine	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
2.	Waste plastic to fuel by pyrolysis process	Product development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
3.	Municipal solid waste into fuel conversion by pyrolysis method	Product development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
4.	Mechanical behaviour and analysis of sisal fiber reinforced polymer composite	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
5.	Mechanical properties of reinforced glass and banana fiber	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
6.	Design and analysis of Helical Spring in a two wheeler suspension system	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
7.	Design and structural analysis of portable rubber tapping machine	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
8.	Experimental analysis of carbon fibre reinforced PMC for spur gear used in Power mills	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
9.	Evaluation of properties for AL-ZrO ₂ -Graphite reinforced metal matrix composites	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
10.	Microstructural Analysis of Al alloy 6061 reinforced with molybdenum	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3

CAY m1 (2018-2019)

Sl. No.	Project Title	Project type	Relevance to POs	Relevance to PSOs
1.	Design and analysis of suspension system in a formula race car.	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
2.	Crash investigation on chassis of a student formula race car	Product development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
3.	Optimization of integral factors to maximize speed in an IOT enabled formula race car	Product development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
4.	Mechanical properties of egg shell powder reinforced Al 2024 aluminium alloy	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
5.	Mechanical Behaviour of aluminium alloy of LM25 reinforced with glass powder	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
6.	Design optimization basic model analysis an static analysis of students formula race car	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
7.	Design and analysis of is brake in two wheelers	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
8.	Wear behaviour of aluminium alloy LM 25 reinforced with coconut shell powder	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
9.	Vibration and wear analysis of natural fibre reinforced polyester composites	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
10.	Wear behaviour of Al 2024 used roofing sheet powder composites.	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3

CAY m2 (2017-2018)

Sl. No.	Project Title	Project type	Relevance to Pos	Relevance to PSOs
1.	Composite rubber rail sleeper analysis	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
2.	HVAC design and analysis for an office building	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

3.	A comparative study of extruded ex-situ & in-situ formed aluminium matrix composites synthesized by stir casting method	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
4.	Experimental analysis of orange peel oil Ethyl Ester (Bio Diesel)	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1
5.	Testing of E-glass fibre reinforced epoxy composites for leaf spring	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
6.	Implementation of emission control device in muffler: Numerical analysis (Flow, Acoustic and emission control)	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1
7.	Mechanical properties of Mg-Mica Composite material	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
8.	Analysis and modification of boiler with hydrogen as an alternative fuel	Application	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
9.	Mechanical property evaluation of pineapple leaf fibre reinforced polyester composites	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO3
10.	Design and modification of existing rubber tapping machine for customer friendly operation.	Product development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

C. Process for Monitoring and Evaluation:

Process of Monitoring:

- At the beginning of the academic year, review schedule is prepared by the project coordinator and approved by the HOD. The schedule is displayed on the notice board for the reference of the students.
- In the time table, weekly 12 hours is allotted for project work.
- As per the schedule, review will be conducted with a team of senior faculty members, project supervisor, project coordinator and HOD.
- Project students meet their respective supervisor weekly once and discuss about the project progress.
- For industrial project, the corresponding supervisor will interact with the respective in charges in industry and collect details about their progress and attendance periodically.
- In-house project, students carry out the projects in the project laboratory during project hours under the guidance of their respective supervisors.
- The supervisor makes sure that every student in a team carries out an independent module in their project.

Review schedule for the project is given below.

Table 2.2.3 (d): Review Schedule

Sl. No.	Review	Tentative Date	Assessment tool
1.	First Review	After 3 weeks from the allocation of project supervisor	Project evaluation Rubrics
2.	Second Review	After 4 weeks from the first Review	
3.	Third Review	After 4 weeks from the second Review	
4.	Report Submission	After a weeks from the third Review	Project Report Evaluation Rubrics

The project is evaluated based on the rubrics mentioned below.

Table 2.2.3 (e): Project evaluation rubrics

Project Rubrics					
	Parameters	Excellent(4)	Good(3)	Average(2)	Review
1.	Problem identification considering societal issues.	<ul style="list-style-type: none"> Excellent explanation of the purpose and need for the project Identification of problem statement based on literature review Consideration of societal issues. 	<ul style="list-style-type: none"> Good explanation of the purpose and need for the project. Identification of problem statement based on few literature review. Few consideration of societal issues. 	<ul style="list-style-type: none"> Moderate explanation of the purpose and need for the project. Identification of problem statement not based on literature review. No consideration of societal issues. 	1 st
2.	Provide eco-friendly solution of the identified problem	<ul style="list-style-type: none"> Excellent solution for the identified problems with suitable methods. Environmental aspects considered 	<ul style="list-style-type: none"> Solution for the identified problems with suitable methods. Few environmental aspects considered 	<ul style="list-style-type: none"> No proper solution for the identified problems. No environmental aspects considered 	1 st
3.	Design and development of	<ul style="list-style-type: none"> Optimized design and 	<ul style="list-style-type: none"> Design and development of models. 	<ul style="list-style-type: none"> No proper design and 	2 nd

	systems and models	development of models. ● Appropriate modern tools used	● Modern tools used	development of models. ● Modern tools not used	
4.	Conduct of experiments/Testing	● Sufficient number of experiments/ Testing conducted. ● Proper codes and standards referred	● Sufficient number of experiments/ Testing conducted. ● Few codes and standards referred.	● Insufficient number of experiments/ Testing conducted. ● No codes and standards referred.	2 nd
5.	Results & Discussion	● Excellent interpretation of Results ● Suitable discussion on results available.	● Good interpretation of Results ● Few discussions on results available.	● No interpretation of Results ● Few discussions on results available.	3 rd
6.	Conclusion	● Exceptional summarization of Project work and Conclusion. ● Scope for future work included.	● Good summarization of Project work and Conclusion. ● Scope for future work included.	● Moderate summarization of Project work and Conclusion. ● No scope for future work included.	3 rd
7.	Project Management	● Excellent work plan and scheduling available. ● Systematic cost analysis and budget plan available.	● Good work plan and scheduling available. ● Cost analysis and budget plan available.	● Average work plan and scheduling available. ● No cost analysis and budget plan available.	All

Table 2.2.3 (f): Project report evaluation rubrics

	Parameters	Excellent(3)	Good(2)	Average(1)
1.	Organization of Report as per guidelines	● Excellent arrangement of contents ● Adopted page dimension and binding	● Good arrangement of contents ● Adopted page dimension and binding	● Poor arrangement of contents ● Adopted page dimension and binding

		specifications of University. • Followed the specified preparation format • Followed the specified typing instructions	specifications of University. • Followed the specified preparation format with few mismatches. • Followed the specified typing instructions	specifications of University. • Did not follow the specified preparation format. • Followed the specified typing instructions
2.	Table of contents and indexing	• Indexing of table of content is perfect	• Some mismatch in Indexing of table of content	• Major mismatches in Indexing in table of content
3.	Quality of Content and Technical details	• Relevant, accurate and adequate contents and technical details available.	• Relevant and adequate contents and technical details available.	• Irrelevant and inadequate contents and technical details available.
4.	Elegance and overall presentation	• Extremely neat and well presented	• Neat and well presented	• Disorderly presented
5.	On time Submission	• Submitted on date	• Late Submission with proper justification	• Late Submission

Process of Evaluation:

- Three reviews will be conducted as per the University regulation and each review carries 20 marks.
- The internal marks for project work will be based on the review sheet which is maintained by the project coordinator.



Mar Ephraem

College of Engineering and Technology

Department: <i>Mechanical Engineering</i>		Year: <i>2015-2019</i>	
Project Title	Initial	<i>Mechanical Properties of egg shell powder reinforced AL2O3+ aluminium alloy.</i>	
	Final (if modified)	-	
Details of the Supervisor(s)		Details of the students	
Name:	Sl. No.	Name	Reg. No.
M. John Irudhaya Raj Signature: <i>[Signature]</i>	1	Abin. S.L	961415114008
	2	Abishek Y	961415114011
	3	Abish Raj.P	961415114012
	4	Anish M	961415114028

REVIEW I

REVIEW I EVALUATION SHEET					
	Parameters	Excellent(4)	Good(3)	Average(2)	
1.	Problem identification considering societal, health, safety, legal and cultural issues.	✓			
2.	Provide eco-friendly solution of the identified problem .		✓		
3.	Project Management	✓			
4.	Presentation	1	1	✓	1
		2	2	✓	2
		3	3	✓	3
		4	4	✓	4
5.	Contribution as individual and team member	1	1	✓	1
		2	2	✓	2
		3	3		3
		4	4	✓	4

PROJECT SUPERVISOR

[Signature]

PROJECT COORDINATOR

[Signature]



Mar Ephraem

College of Engineering and Technology

Department: <i>Mechanical Engineering</i>		Year: <i>2015-2019</i>	
Project Title	Initial	<i>Mechanical Properties of egg shell Powder Reinforced Al2024 Aluminium Alloy.</i>	
	Final (if modified)	-	
Details of the Supervisor(s)		Details of the students	
Name:	Sl. No.	Name	Reg. No.
<i>M. John Iruthaya Raj.</i> Signature:	1	<i>Abin S.L</i>	<i>961415114008</i>
	2	<i>Abishek. Y</i>	<i>961415114011</i>
	3	<i>Abish Raj. P</i>	<i>961415114012</i>
	4	<i>Anish. M</i>	<i>961415114028</i>

REVIEW II

REVIEW 2 EVALUATION SHEET					
	Parameters	Excellent(4)	Good(3)	Average(2)	
1.	Design and development of systems and models	✓			
2.	Conduct of experiments/Testing	✓			
3.	Project Management		✓		
4.	Presentation	1	1	1	
		2	2	2	
		3	3	3	✓
		4	4	4	
5.	Contribution as individual and team member	1	1	1	
		2	2	2	
		3	3	3	
		4	4	4	

PROJECT SUPERVISOR

PROJECT COORDINATOR



Mar Ephraem

College of Engineering and Technology

Department: <i>Mechanical Engineering</i>		Year: <i>2015-2019</i>	
Project Title	Initial	<i>Mechanical Properties of Egg Shell Powder Reinforced AL6064 Aluminium Alloy</i>	
	Final (if modified)		
Details of the Supervisor(s)		Details of the students	
Name: <i>M. John Inuthaya Raj</i> Signature: <i>[Signature]</i>	Sl. No.	Name	Reg. No.
	1	<i>Abin. S. L.</i>	<i>961415114008</i>
	2	<i>Abishek. Y</i>	<i>961415114011</i>
	3	<i>Abish Raj. P</i>	<i>961415114018</i>
	4	<i>Anish. M</i>	<i>961415114028</i>

REVIEW III

REVIEW 3 EVALUATION SHEET						
	Parameters	Excellent(4)		Good(3)		Average(2)
1.	Results & Discussion	✓				
2.	Conclusion			✓		
3.	Project Management			✓		
4.	Presentation	1	✓	1		1
		2	✓	2		2
		3	✓	3		3
		4	✓	4		4
5.	Contribution as individual and team member	1	✓	1		1
		2	✓	2		2
		3	✓	3		3
		4	✓	4		4

PROJECT SUPERVISOR

[Signature]

PROJECT COORDINATOR

[Signature]

Figure 2.2.3 (b): Sample project review sheet

D. Process to assess individual and team performance:

Students are provided a forum to apply their technical and innovative knowledge by doing projects. Students are instructed to form teams based on their domain. Each team constitutes a maximum of four students guided by a faculty of the same area of interest. Reviews are conducted to assess the individual and team performance of the students as described in the rubrics.

Table 2.2.3 (g): Project Presentation rubrics

Project Rubrics					
	Parameters	Excellent(4)	Good(3)	Average(2)	Review
1.	Presentation	<ul style="list-style-type: none"> ● Clear and precise presentation with additional information. ● Excellent delivery of contents with exceptional communication skills. ● Answers all questions correctly during viva voice. 	<ul style="list-style-type: none"> ● Clear and precise presentation with adequate information. ● Good delivery of contents with decent communication skills. ● Answers few questions correctly during viva voice. 	<ul style="list-style-type: none"> ● Poor presentation with inadequate information. ● Average delivery of contents with decent communication skills. ● Answers very few questions correctly during viva voice. 	All
2.	Contribution as individual and team member	<ul style="list-style-type: none"> ● Well defined roles and responsibilities among the team members. ● Excellent contribution of all team members. ● Exceptional coordination among the team members. 	<ul style="list-style-type: none"> ● Roles and responsibilities are assigned among the team members. ● Good contribution of all team members. ● Good coordination among the team members. 	<ul style="list-style-type: none"> ● Roles and responsibilities are not assigned among the team members. ● Few contribution of all team members. ● No coordination among the team members. 	All

E. Quality of completed projects/working prototypes

- Final project reports/demo is evaluated by a team of their respective supervisor, and a panel of senior faculty members.
- The projects are evaluated and awarded internal assessment marks for a maximum of 100. The marks are awarded based on the project contribution towards attainment of PO's and PSO's.
- The best projects are identified during University project viva-voce by the external and internal examiner based on their presentation and the demo/working model of the projects.

Table 2.2.3 (h): List of Best Projects sample

Academic Year	Project Title	Area of specialization	Project type
CAY 2019-2020	Waste plastic to fuel by pyrolysis process	Thermal Engineering	Product development
	Performance evaluation of sit to stand and mobility assistance device for physically challenged people	Analysis	Research
CAY m1 2018-2019	Crash investigation on chassis of a student formula race car	Automobile	Application
	Wear behaviour of Al 2024 used roofing sheet powder composites.	Engineering Materials	Research
CAY m2 2017-2018	Mechanical properties of Mg- Mica Composite material	Engineering Materials	Research
	Analysis and modification of boiler with hydrogen as an alternative fuel	Thermal Engineering	Application

Table 2.2.3 (i): List of Working Prototypes sample

Academic Year	Project Title	Area of specialization
CAY 2019-2020	Municipal solid waste into fuel conversion by pyrolysis method	Manufacturing
	Waste plastic to fuel by pyrolysis process	Manufacturing
CAY m1 2018-2019	Design and Fabrication of automatic tea blending Machine	Manufacturing
	Design and Fabrication of kicker operated coconut dehusking.	Manufacturing
CAY m2 2017-2018	Design and Fabrication of solar light for garden.	Manufacturing
	Design and modification of existing rubber tapping machine for customer friendly operation.	Manufacturing

F. Evidences of papers published /Awards received by projects etc

- Supervisor encourages the students to publish papers in reputed journals

Table 2.2.3 (j): A Few Publications in Symposium / Conference / Journal:

Year	Author Name	Paper	Published in Symposium / Conference / Journal	Indexing / Level
------	-------------	-------	---	------------------

CAY 2019-2020	Allen Sabu Daniel	Mechanical behavior and analysis of sisal fibre reinforced polymer composite.	Symposium	National
	Alphine A	Design and structural analysis of portable rubber tapping machine	Symposium	National
	Abinesh E	Design and structural analysis of portable rubber tapping machine	Symposium	National
	Nejin Infant N C	Effect of chemical treatment on pineapple leaf and banana fibre reinforced hybrid polymer composite.	Symposium	National
	Saran S Nair	Mechanical characterisation of SiC reinforced Al 7075 matrix composite for aerospace industry	Symposium	National
CAY m1 2018-2019	Febin Roy	Design and Analysis of front mono suspension	National Conference	National
	Sibin Samuel	Aerodynamic analysis of formula race car	Symposium	National
	Ron Roy	Optimization of integral factors to maximize speed in an IOT enabled student formula race car	National Conference	National
CAY m2 2017-2018	Alex Y	Biodiesel Production / Experimental Analysis of Biodiesel production from orange peel	National Conference	National
	Jibu Chandy Jacob	Design and Analysis of front mono suspension	National Conference	National
	Jobie Earnest	Biodiesel Production / Experimental Analysis of Biodiesel production from orange peel	National Conference	National

Table 2.2.3 (k): Best project which received awards from international / National body:

Year	Project title	Student Name	Awarding Agency
CAY 2019-2020	Coconut scrubber and milk extractor	Nijin S T Pratheesh S D Jayan J J Jijo J	New Gen IEDC, Mar Ephraem
	Portable Coconut oil Cooker	K. S. Ajith B. Ajil Mon C. Vinoth	New Gen IEDC, Mar Ephraem

		K Sajan	
	Telescopic semi automatic fruit plucker	Joein J Relton R Paul Richard D P Sherly B	New Gen IEDC, Mar Ephraem
	Coconut deshelling and grating machine	Karthisuyan Sarath Joe Rahul M Sajan R	New Gen IEDC, Mar Ephraem
	Coin operated rubber rollers	Jaireesh J S Aswinth Ajith B Ajay R B Ajesh R M	New Gen IEDC, Mar Ephraem
	Semi Automatic Coconut Dehusker.	Deuker Dikkinson Abish Raj A Rino M Simiyon I	New Gen IEDC, Mar Ephraem
CAY m1 2018-2019	Design and Fabrication of Automatic tea blending Machine	Alphine A Abinesh E Abilash A Anish	New Gen IEDC, Mar Ephraem
	Design and Fabrication of Kicker operated coconut dehusking	Shijo Paul C M Prabin G Vibin Jose V Prakash P	New Gen IEDC, Mar Ephraem
CAY m2 2017-2018	Generation of water from moving air (wind)	Jobie Earnest	New Gen IEDC, Mar Ephraem

Table 2.2.3 (I): Number of presentations in Symposium / Conference:

Year	Presentation	
	Symposium	Conference
CAY 2019-2020	10	5
CAY m1 2018-2019	45	27
CAY m2 2017-2018	42	24

2.2.4. Initiatives related to industry interaction

Activities involved in the industry institute interaction are

- Industrial Visits
- MoU with Industry
- Guest Lecturers/Seminars/ Workshops
- Internships
- Placement sessions
- Regular training programs in industry/Institute

A. Industry Supported Laboratories

The industry supported laboratories develop best learning process using a comprehensive understanding of industry's best practices for students.

Table: 2.2.4 (a) Industry Supported Laboratories

S. No.	Lab	Facility	Industry	Objective
1	Automobile Lab	Alto chaises, 4 stroke Petrol Engine, Diesel Engine, Gear box, Steering System, Hydraulic Brake.	GG Maruthi Guides, Marthandam.	To learn Automobile engine assembling.
		Ford Figo Demo Car	Ford Motor Company	To demonstrate automobile parts and components

Purpose and Scope:

1. To establish a collaborative interaction to improve the standard of students and faculty of Mar Ephraem to industrial standards through lab-based Training programs, workshops and seminars.
2. The students are exposed to the latest technical skills and practices of industry.
3. To equip the students with necessary skills in automobile for placement.

B. Industry involvement in the Program design and partial delivery of any regular courses for students:

The college is affiliated to Anna University, Chennai and the syllabus is framed by Anna University. With the help of industrial experts, the academic and industry gaps are identified and suitable areas or topics will be suggested by them to fill the gap. The industry delegates are considered as industrial partner who helps in providing suggestions to improve the industrial relationship.

Table: 2.2.4 (b): -Industrial partners who helps in providing suggestions to improve the industrial relationship

Sl.No	Name	Designation	Company
1.	Er. S. Sunil Kumar	Managing Director	Hyasun Engineering Projects Pvt Ltd., Chennai.
2.	Er. I. Mandela	Design Engineer	Green Views Piping Solutions, Chennai.
3.	Er. Balasubramanian	Senior Production Manager	Ashok Leyland, Chennai.
4.	Er. Hariharasudhan	Lead Manager	Mahindra & Mahindra, Chennai
5.	Er. S. Vijayakumar	Operations	Kandan Alloys, Malur, Karnataka.
6.	Er. Jaison Johnson	Managing Director	TISAT, Kochin.
7.	Er. K. Aniruthan	Centre Head	CADD Centre, Marthandam.
8.	Er. Berlin Raj	Centre Manager	CADD Centre, Marthandam.
9.	Er. S Shibu	Design Engineer	Devon Machines, Chennai.

- MOU have been signed with reputed industries. Through these MOU several training and courses have been conducted for the students to incorporate both technical as well as employability skills and employment.

Table: 2.2.4 (c) A Memorandum of Understanding

Sl. No.	Name of the Company/Industry	Nature of MOU	Date of MOU
1.	CADD Centre, Marthandam	Training on ANSYS workbench	06.01.2020
		Training on ANSYS workbench	03.01.2019
		Training on CATIA	06.07.2018
2.	GG Maruthi Guides, Nagercoil.	Hands on Training in dismantling and assembling of two wheeler and four wheeler components.	28.02.2019
			24.03.2018
			28.02.2017
3.	Hyson Engineering Projects Pvt Ltd., Chennai.	Piping Design using PDMS	11.08.2016

- The industrial experts will deliver lecture, presentations and hands on practice to the students during workshops/seminars organized to fill the industry gaps and to attain the target COs and POs.

Table:2.2.4 (d): Industrial Experts delivery details**CAY -2019 – 2020**

Sl. No	Action taken	Date	Resource Person with designation
1.	Seminar on Intellectual property rights	06.09.2019	Er. S. Sunil Kumar, Managing Director, Hyasun Engineering Projects Pvt Ltd., Chennai
2.	Seminar on Safety Engineering	08.11.2019	Er.R. Manoj, Manager , TUV Rheinland NIFE Academy Pvt Ltd, Coimbatore
3.	Seminar on Application of FEA in Industries	22.01.2020	Er. I. Mandela, Design Engineer, Green Views Piping Solutions, Chennai.
4.	Hands on training in dismantling and assembling of two wheeler and four wheeler components.	27-02-2020	Athen Bajaj, Nagercoil

CAY m1- 2018 – 2019

Sl. No	Action taken	Date	Resource Person with designation
1.	Seminar on Intellectual property right	18.07.2018	Er. S. Sunil Kumar, Managing Director, Hyasun Engineering Projects Pvt Ltd., Chennai.
2.	Modelling using high end software CATIA	29.08.2018	Er. K. Aniruthan, Centre Head, CADD Centre, Marthandam.
3.	Finite Element application in industry.	28.01.2019	Er. I. Mandela, Design Engineer, Green Views Piping Solutions, Chennai.
4.	Analysing using high end software ANSYS workbench	08-02-2019	Er. Berlin Raj, Centre Manager, CADD Centre, Marthandam..
5.	Guest Lecture on Automotive Industry-Innovation and History of Indian Inventiveness	10.01.2019	Er. Hariharasudhan , Lead Manager, Mahindra & Mahindra, Chennai
6.	Computational fluid dynamics workshop.	12.02.2019 to 18.02.2019	Dr. S. Joseph Sekhar and Team, St. Xavier Catholic College of Engineering, Nagercoil.
7.	Hands on Training in dismantling and assembling of two wheeler and four wheeler components.	28.02.2019 & 01.03.2019	Athen Bajaj, Nagercoil

CAYm2- 2017 – 2018

Sl. No	Action taken	Date	Resource Person with designation
1.	Computational fluid dynamics workshop.	17.08.2017 to 19.08.2017	Dr. Joseph Sekhar and Team, St. Xavier Catholic College of Engineering, Nagercoil.
2.	Seminar on industrial robotics	12.09.2017	Er. S. Vijayakumar, Operations, Kandan Alloys, Malur, Karnataka.
3.	Guest Lecture on advanced IC engine	04.10.2017	Er. Jaison Johnson, Managing Director, TISAT, Cochin.
4.	Finite Element application in industry.	22.01.2018	Er. I. Mandela, Design Engineer, Green Views Piping Solutions, Chennai.
5.	Modelling using high end software	08.01.2018	Er. K. Aniruthan, Centre Head, CADD Center, Marthandam.
6.	Hands on Training in dismantling and assembling of two wheeler and four wheeler components.	24.03.2018	Athen Bajaj, Nagercoil, G.G Maruti Guides

C. Impact analysis of industry institute interaction and actions taken**Table: 2.2.4 (e) Impact analysis of industry institute interaction**

Activity	Beneficiaries	Impact
Value added course on MEP	Final year students of batch 2019.	4 students of batch 2019 are working as Design Engineer in PARASCAD, Mumbai.
Computational fluid dynamics workshop.	Final year students of batch 2018.	2 students are working in the field of CFD in CADOPT, Coimbatore.
Hands on Practice in assembly and disassembly of two wheeler and four wheeler components.	Final year / Third year students of batch 2018.	12 students of batch 2018 are working in the field of Automobile Engineering at Wonjin Autoparts India Private Limited, Chennai.

Action Taken

The feedback is collected during the Industry institute Interaction Program and Invited lectures. Based on the feedback of the students, the department plans for future initiatives related to industry interaction by the industrial expert for the upcoming batches.

2.2.5 Initiatives related to industry internship / summer training**(15)**

Industrial visit/ internship is a part of the professional courses, during which students visit companies and get insight on how companies work and also gather information related to the practical aspects of the course which cannot be visualized in lectures. With an aim to go beyond academics, these visits are arranged to develop the insights of the students – attaining practical knowledge and their theoretical applications thereof.

Table: 2.2.5 (a): Industrial visit for Student:

Sl. No.	Name of the Industry	Date of visit	Type of industry	Planned / Unplanned	Total No. of Students	Year/Sem	Relevant area of training
CAY (2019-2020)							
1.	Tamilnadu State Transport Corporation Ltd., Nagercoil	12/08/2019	Automobile	Planned	75	4 th / 7 th	Re-conditioning methods of engine, gear
2.	Tamilnadu State Transport Corporation Ltd., Nagercoil	13/08/2019	Automobile	Planned	75	2 nd / 3 rd	Re-conditioning methods of engine, gear
3.	Prakash body builders, Bangalore.	28/02/2020	Automobile	Planned	90	3 rd / 6 th	Vehicle body building
4.	ISRO, Mahendragiri.	10/01/2020	Space Research organisation	Planned	125	3 rd / 6 th	Propulsion system
5.	ISRO, Mahendragiri.	11/01/2020	Space Research organisation	Planned	125	4 th / 8 th	Propulsion system

			n				
CAY m1 (2018-2019)							
1.	Tamilnadu State Transport Corporation Ltd., Nagercoil	12/08/2018	Automobile	Planned	75	4 th / 7 th	Re-conditioning methods of engine, gear
2.	Shipyard, Goa.	10/08/2018	Shipyard	Planned	105	3 rd / 5 th	Marine diesel engine
3.	Hindustan Aeronautics Limited, Bangalore.	09/08/2018	Aerospace	Planned	91	2 nd / 3 rd	Aircraft Engine
4.	Entell Cad Engineering , Mysuru.	10/08/2018	Design & Manufacturing	Planned	90	3 rd / 5 th	Gear box Manufacturing
CAYm2 (2017-2018)							
1.	Shipyard, Goa.	02/08/2017	Shipyard	Planned	120	4 th / 7 th	Marine diesel engine
2.	Prakash body builders, Bangalore.	28/08/2017	Automobile	Planned	90	3 rd / 5 th	Vehicle body building
3.	Gajalaxmi Industries, Bangalore.	30/08/2017	Manufacturing	Planned	90	3 rd / 5 th	Machine Tools
4.	ISRO, Mahendragiri.	10/01/2018	Space Research organisation	Planned	125	2 nd / 3 rd	Propulsion system

Table: 2.2.5 (b): Industrial /internship /summer training of more than two weeks and post training Assessment

Sl. No	Name of the Industry	Date of visit	Type of industry	Planned / Unplanned	Total Number of Students	Year/Sem	Relevant area of training
CAY (2019-2020)							
1.	Kerala Automobiles Limited, Tiruvandram.	22.12.2019 to 28.12.2019	Automobile	Planned	10	III Year	Engine overhauling
2.	Kerala Automobiles Limited, Tiruvandram.	22.12.2019 to 28.12.2019	Automobile	Planned	10	IV Year	Engine overhauling
3.	NTPC Limited, Kayamkulam	04.12.2018 to 10.12.2018	Power Plant	Planned	4	II Year	Rajiv Gandhi Combined Cycle Power Project
4.	NTPC Limited, Kayamkulam	04.12.2018 to 10.12.2018	Power Plant	Planned	5	IV Year	Rajiv Gandhi Combined Cycle Power Project
5.	The Fertilisers And Chemicals Travancore Limited, Udyogamandal.	26.11.2019 to 01.12.2019	Fertiliser	Planned	8	II Year	Maintenance of Machines
6.	The Fertilisers And Chemicals Travancore Limited,	26.11.2019 to 01.12.2019	Fertiliser	Planned	8	III Year	Maintenance of Machines

	Udyogaman dal.						
7.	TNSTC, Nagercoil.	17.01.2020 to 22.01.2020	Automobile	Planned	8	III Year	Re-conditioning methods of engine, gear box, FI pump.
8.	TNSTC, Nagercoil.	17.01.2020 to 22.01.2020	Automobile	Planned	6	IV Year	Re-conditioning methods of engine, gear box, FI pump.
CAYm1 (2018-2019)							
1.	Frigorifico Allana Private Limited, Ghazlabad.	26.11.2018 to 10.12.2018	FMCG	Planned	3	II Year	Refrigeration
2.	Kerala Automobiles Limited, Tiruvandram.	22.12.2018 to 24.12.2018	Automobile	Planned	4	II Year	Engine overhauling
3.	NTPC Limited, Kayamkulam	04.12.2018 to 06.12.2018	Power Plant	Planned	9	II Year	Rajiv Gandhi Combined Cycle Power Project
4.	The Fertilisers And Chemicals Travancore Limited, Udyogaman dal.	26.11.2018 to 01.12.2018	Fertiliser	Planned	3	II Year	Maintenance of Machines
5.	KSRTC, Pathanamthitta.	01.12.2018 to 05.12.2018	Automobile	Planned	11	II Year	Quality control
6.	Steel India Corporation, Kochi.	26.11.2018 to 30.11.2018	Production	Planned	10	II Year	Manufacturing Division
7.	Luxury Coach Builders Pvt Limited, Madurai.	06.12.2018 to 15.12.2018	Automobile	Planned	6	II Year	Body building section

8.	Smec Automation , Ernakulam.	26.11.2018 to 30.11.2018	Oil and Gas	Planned	3	II Year	Automation
9.	Shastha Plastic Moulders, Bangaluru.	26.11.2018 to 30.11.2018	Manufacturing	Planned	3	II Year	Injection moulding processess
10.	TNSTC, Nagercoil.	17.16.2019 to 22.06.2019	Automobile	Planned	20	II Year	Re-conditioning methods of engine, gear box, FI pump.
11.	Godwin Motors, Chennai.	05.06.2019 to 21.06.2019	Automobile	Planned	6	II Year	Passenger car, Engines, Gear box
12.	Sothorn Railways, Trivandram.	17.12.2018 to 21.12.2018	Railway	Planned	6	II Year	Coaching Depot, Trivandrum
13.	Indian Rare Earths Limited, Manavalakurichi.	21.05.2018 to 26.05.2018	Mineral	Planned	2	III Year	Industrial Safety
14.	TNSTC ,Nagercoil	14.12.2018 to 19.12.2018	Automobile	Planned	4	III Year	Re-conditioning methods of engine, gear box, FI pump.
15.	Al Suwaidi Aluminium & Glass Cont.Co.II, Fujairah, UAE.	21.12.2018 to 04.01.2019	Aluminium	Planned	3	IV Year	Application of industrial machinery
CAYm2 (2017-2018)							
1.	NTPC Limited, Kayamkulam	21.05.2018 to 26.05.2018	Power Plant	Planned	3	III Year	Rajiv Gandhi Combined Cycle Power Project
2.	KIART, Nagercoil	18.12.2017 to 23.12.2017	Design	Planned	1	III Year	Basic CAD modelling
3.	Kerala Automobiles Limited,	22.12.2017 to 24.12.2017	Automobile	Planned	12	II Year	Engine Overhauling

	Tiruvandram.						
4.	NTPC Limited, Kayamkulam	04.12.2017 to 06.12.2017	Power Plant	Planned	8	II Year	Rajiv Gandhi Combined Cycle Power Project
5.	The Fertilisers And Chemicals Travancore Limited, Udyogamandal.	26.11.2017 to 01.12.2017	Fertiliser	Planned	16	III Year	Quality control

Table: 2.2.5 (c): Impact Analysis of Industrial Training:

Activity	Period	Beneficiaries	Impact
Industrial Visit (Prakash Body Builders, Bangalore)	2 visits per year	All students	<ul style="list-style-type: none"> 10 students of batch 2017 were placed as quality Engineer in LGB Coimbatore. 7 students of batch 2018 are working as production Engineer in Necco Tools, Chennai.
Internship	2 per year during Summer and Winter Vacation	All students	<ul style="list-style-type: none"> 4 students of batch 2019 are working as Design Engineer in PARASCAD, Mumbai.

D. Student Feedback on Initiative

After attending every training/ internship / visit, the students are asked to submit a feedback form which has details about the training, or activity conducted. The feedback is analyzed by the Department and necessary actions are taken during next year initiatives.



Mar Ephraem

College of Engineering and Technology

DEPARTMENT OF MECHANICAL ENGINEERING

Industrial Internship/Training / Visit Feedback

Name:	RON ROY	
Roll No.:	961415114096	Semester: VII
Name & Address of the Industry/Organization/Company:	Al Owaidi Aluminium & Glass Co. Ltd	
Period of Training/Internship	From: 01-12-2018	To: 04-01-2019
Title/Short description of the Industrial Training/Internship:	Application of Industrial Machinery	
Whether report has been submitted:	Yes / No <input checked="" type="checkbox"/>	

Put ☒ mark in appropriate cells

	5	4	3	2	1
Evaluate the training/ internship programme					
Scale: 1- Poor; 2- Average; 3- Good; 4- Very Good; 5- Excellent					
Relevance of the industrial training/ internship with the curriculum	<input checked="" type="checkbox"/>				
Access to different facilities of interest - for observation, gather data and get your clarifications	<input checked="" type="checkbox"/>				
Hospitality of the industry (Food / refreshments & accommodation / willingness to help you for any problems faced during the period)		<input checked="" type="checkbox"/>			
Overall usefulness of the industrial training/ internship	<input checked="" type="checkbox"/>				

	Design	Analysis	Development	Testing	Others
Type of Exposure given		<input checked="" type="checkbox"/>			

	Yes	No
Whether any specific official was assigned for you during the training / intern?	<input checked="" type="checkbox"/>	
Whether any relevant technical literature is obtained from the industry?	<input checked="" type="checkbox"/>	
Was the training based on a well-defined schedule and adherence to the schedule?	<input checked="" type="checkbox"/>	
Was the opportunity given to work on real time problem or practical problem?	<input checked="" type="checkbox"/>	
Do you recommend this organization for training / internship in future?	<input checked="" type="checkbox"/>	

Signature with
Date

[Signature]
04/01/2019

Figure: 2.2.5 Sample feedback on In-plant training / Internship

3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)**Total Marks 120.00****Define the Program specific outcomes****3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)**

PSO1	Able to perform thermal analysis of mechanical systems
PSO2	Able to evolve design solutions to mechanical products
PSO3	Able to analyze manufacturing Engineering problems and provide Fabrication solutions

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked)**(5)Institute Marks : 5.00**

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :	C204	Course Year:	2017-2018
Items	2020-21		
C204.1	Compute the properties and characteristics of fluids		
C204.2	Calculate the major and minor losses of fluid flow through pipes.		
C204.3	Apply dimensional analysis using Bucking ham Pi theorem for a system.		
C204.4	Compute the performance characteristics of pumps		
C204.5	Compute the performance characteristics of turbines		
C204.6	Predict the nature of physical quantities using model analysis.		

Course Name :	C212	CourseYear:	2017-2018
Items	2020-21		
C212.1	Explain the mechanism of material removal processes		
C212.2	Describe the constructional and operational features of centre lathe and other special purpose lathes.		
C212.3	Describe the constructional and operational features of shaper, planner, milling, drilling,sawing and broaching machines		
C212.4	Explain the types of grinding and gear manufacturing processes		

C212.5	Develop part programs for NC machines
C212.6	Compare the functions and applications of different metal cutting tools

Course Name :	C301	Course Year:	2018-2019
Items	2020-21		
C301.1	Explain product cycle, design process , sequential and concurrent engineering in design process.		
C301.2	Explain the fundamentals of parametric curves, surfaces and Solids		
C301.3	Illustrate the algorithms for visual realism		
C301.4	Explain the fundamentals of assembly of parts		
C301.5	Summarize the different types of graphic standards used in CAD		
C301.6	Describe 2D, 3D transformations of computer graphics		

Course Name :	C313	Course Year:	2018-2019
Items	2020-21		
C313.1	Summarize the basics of finite element formulation		
C313.2	Apply finite element methods to solve one dimensional problems		
C313.3	Apply finite element methods to solve two-dimensional Scalar Problems		
C313.4	Apply finite element methods to solve two-dimensional Vector problems		
C313.5	Apply finite element methods to solve problems on isoparametric elements.		
C313.6	Solve basic Dynamic problems using Finite element methods		

Course Name :	C403	CourseYear:	Course Name :
Items	2020-21		
C403.1	Explain the basic concept of CAD/CAM in computer integrated manufacturing		
C403.2	Illustrate the use of computers in process planning		
C403.3	Differentiate the different coding system used in Group Technology		
C403.4	Explain the concept of FMS and AGVs		
C403.5	Classify the robots used in Industrial application		
C403.6	Solve quantitative analysis in cellular manufacturing using ROC Algorithm		

Course Name :	C410	CourseYear:	2019-2020
Items	2020-21		
C410.1	Explain the basic concepts of Economics and different types of costs.		

C410.2	Describe value engineering procedures
C410.3	Differentiate Cash Dominated and Revenue Dominated Cash flow.
C410.4	Explain the principles of Replacement and Maintenance analysis.
C410.5	Compute depreciation of products.
C410.6	Determine the economic life of an asset.

3.1.2 CO-PO matrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5)

Institute Marks : 5.00

1. Course name : C204

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204.1	3	2	1	2	-	-	-	-	-	-	-	-
C204.2	3	2	1	2	-	-	-	-	-	-	-	-
C204.3	3	2	1	2	-	-	-	-	-	-	-	-
C204.4	3	2	1	2	-	-	-	-	-	-	-	-
C204.5	3	2	1	2	-	-	-	-	-	-	-	-
C204.6	3	2	1	2	-	-	-	-	-	-	-	2
Average	3.00	2.00	1.00	2.00	-	-	-	-	-	-	-	2.00

2. Course name: C212

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	2	1	-	-	-	-	-	-	-	-	-	2
C212.2	2	1	-	-	-	-	-	-	-	-	-	-
C212.3	2	1	-	-	-	-	-	-	-	-	-	-
C212.4	2	1	-	-	-	-	-	-	-	-	-	-
C212.5	3	1	-	-	2	-	-	-	-	-	-	2
C212.6	2	1	-	-	-	-	-	-	-	-	-	2
Average	2.17	1.00	-	-	2.00	-	-	-	-	-	-	2.00

3. Course name: C301

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	2	1	-	-	2	-	-	-	-	2	-	2

C301.2	2	1	-	-	2	-	-	-	-	2	-	2
C301.3	2	1	-	-	2	-	-	-	-	2	-	2
C301.4	2	1	-	-	2	-	-	-	-	2	-	2
C301.5	2	1	-	-	2	-	-	-	-	2	-	2
C301.6	2	1	-	-	2	-	-	-	-	2	-	2
Average	2.00	1.00	-	-	2.00	-	-	-	-	2.00	-	2.00

4. Course name : **C313**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313.1	2	1	-	-	2	-	-	-	-	-	-	-
C313.2	3	2	1	2	2	-	-	-	-	-	-	2
C313.3	3	2	1	2	2	-	-	-	-	-	-	2
C313.4	3	2	1	2	-	-	-	-	-	-	-	2
C313.5	3	2	1	-	-	-	-	-	-	-	-	-
C313.6	3	2	1	-	2	-	-	-	-	-	-	2
Average	2.83	1.83	1.00	2.00	2.00	-	-	-	-	-	-	2.00

5. course name : **C403**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C403.1	2	1	-	-	1	-	-	-	-	2	-	-
C403.2	2	1	-	-	2	-	-	-	-	2	2	-
C403.3	2	1	-	-	1	-	-	-	-	-	-	-
C403.4	2	1	-	-	2	-	-	-	-	-	-	-
C403.5	2	1	-	-	1	-	-	-	-	-	-	2
C403.6	3	2	1	-	1	-	-	-	-	2	-	-
Average	2.17	1.17	1.00	-	1.33	-	-	-	-	2.00	2.00	2.00

6. course name : **C410**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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C410.1	-	-	-	-	-	-	-	-	-	-	2	2
C410.2	2	1	-	-	-	-	-	-	-	-	2	-
C410.3	2	1	-	-	-	-	-	-	-	-	2	2
C410.4	2	1	-	-	-	-	-	-	-	-	2	2
C410.5	2	1	-	-	-	-	-	-	-	-	2	-
C410.6	2	1	-	-	-	-	-	-	-	-	2	-
Average	2.00	1.00	-	-	-	-	-	-	-	-	2.00	2.00

1. Course Name : **C204**

CO	PSO 1	PSO 2	PSO 3
C204.1	2	-	-
C204.2	2	-	-
C204.3	2	-	-
C204.4	2	-	-
C204.5	2	-	-
C204.6	2	-	-
Average	2.00	-	-

2. Course Name : **C212**

CO	PSO1	PSO2	PSO 3
C212.1	-	-	3
C212.2	-	-	3
C212.3	-	-	3
C212.4	-	-	3
C212.5	-	-	3
C212.6	-	-	3

Average	-	-	3.00
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3. . Course Name : **C301**

CO	PSO1	PSO2	PSO 3
C301.1	-	2	-
C301.2	-	2	-
C301.3	-	2	-
C301.4	-	2	-
C301.5	-	2	-
C301.6	-	2	-
Average	-	2.00	-

4. Course Name : **C313**

CO	PSO1	PSO2	PSO 3
C313.1	2	2	-
C313.2	2	2	-
C313.3	2	2	-
C313.4	2	2	-
C313.5	-	-	-
C313.6	2	2	-
Average	2.00	2.00	-

5. . Course Name : **C403**

CO	PSO1	PSO2	PSO 3
C403.1	-	2	2
C403.2	-	-	2
C403.3	-	-	2
C403.4	-	-	2

C403.5	-	-	2
C403.6	-	-	2
Average	-	2.00	2.00

6. . Course Name : C410

CO	PSO1	PSO2	PSO 3
C410.1	-	-	-
C410.2	-	-	-
C410.3	-	-	-
C410.4	-	-	-
C410.5	-	-	-
C410.6	-	-	-
Average	-	-	-

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	-	-	-	-	3.00	-	1.67
C102	3	2	1	-	-	-	-	-	-	-	-	-
C103	3	2.17	1.17	-	-	-	-	-	-	-	-	-
C104	3	2	1	-	-	-	-	-	-	-	-	-
C105	2.67	1.67	1.00	1.00	2.50	-	-	-	-	-	-	-
C106	1.83	1.00	-	-	-	-	-	-	2.00	2.00	-	-
C107	2.50	2.00	1.33	1.33	1.17	0.83	1.33	-	1.50	0.83	-	-
C108	2.00	-	-	-	-	-	-	-	2.00	-	-	-
C109	3	2	-	-	1	-	-	-	-	-	-	-
C110	-	-	-	-	-	-	-	-	-	3.00	-	-
C111	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C112	3.00	2.50	1.83	-	-	-	-	-	-	-	-	-

C113	2.33	1.67	2.00	-	-	-	-	-	-	2.00	-	1.83
C114	2.83	1.83	1.00	-	-	-	-	-	-	-	-	-
C115	2.83	2.00	1.20	1.00	-	-	-	-	-	-	-	-
C116	2.00	-	-	-	2.00	-	-	-	-	-	-	-
C117	3	2	1	-	1.17	-	-	-	-	-	-	-
C201	3	2	1	-	-	-	-	-	-	-	-	-
C202	3	2	1	-	-	-	-	-	-	2	-	-
C203	3	2	1	-	-	-	-	-	-	-	-	2
C204	3	2	1	2	-	-	-	-	-	-	-	2
C205	2	1	-	-	-	-	2	-	-	-	-	2
C206	2	1	-	-	-	2	-	-	-	-	-	-
C207	2	-	-	-	-	-	-	-	2	2	-	2
C208	2	1	-	2	-	-	-	-	2	2	-	-
C209	2	-	-	2	-	-	-	-	2	2	-	-
C210	3	2	1	2	-	-	-	-	-	-	-	2
C211	2.83	1.83	1	-	-	-	-	-	-	-	-	2
C212	2.17	1	-	-	2	-	-	-	-	-	-	2
C213	2	1	-	-	-	-	2	-	-	-	-	2
C214	2	-	-	-	-	2.33	3	-	-	-	-	2
C215	2.83	1.83	1	1	-	-	2	-	-	-	-	-
C216	2	-	-	-	2	-	-	-	2	2	-	-
C217	2.6	2	1	2	2	-	1	-	2	-	-	-
C218	2	-	-	2	-	-	2	-	2	2	-	-
C301	2	1	-	-	2	-	-	-	-	2	-	2
C302	2.83	2	1.2	2	-	-	-	-	-	-	-	2
C303	2.83	1.83	1.83	-	-	2	-	-	-	2	-	2
C304	2	1	-	-	2	-	-	-	-	-	-	2
C305	3	2	1	-	-	-	-	-	-	-	-	2
C306	-	-	-	-	-	2	-	3	-	-	-	-
C307	2	-	-	2	-	-	-	-	2	2	-	2
C308	3	2	1	2	-	-	-	-	2	2	-	-
C309	2	1	-	2	2	-	-	-	2	2	-	-
C310	3	2	2	-	-	2	-	-	-	2	-	2
C311	-	-	-	-	-	-	-	2	2.2	2	3	1.6
C312	2	1	-	-	-	2	2	-	-	-	-	2

C313	2.83	1.83	1	2	2	-	-	-	-	-	-	2
C314	3	2	1	-	-	-	-	-	-	-	-	2
C316	2	-	-	-	3	-	-	-	-	2	-	2
C317	2.33	3	3	-	2	3	-	2	3	3	3	2
C318	-	-	-	-	-	-	-	-	2	2.6	-	2
C401	2	1	-	-	-	3	3	-	-	-	-	2
C402	2	1	-	-	-	-	-	-	-	-	-	2
C403	2.17	1.17	1	-	1.33	-	-	-	-	2	2	2
C404	-	-	-	-	-	2	-	2	2.25	2	-	2
C407	2.80	2.20	1.50	2	3	-	-	-	-	2	-	2
C408	3	2.2	1.2	1	3	-	-	-	2	2	-	2
C409	2	-	-	-	-	-	-	-	-	2	-	-
C410	2	1	-	-	-	-	-	-	-	-	2	2
C413	3	3	2.33	1.5	3	2	2	2	3	2.67	3	2
C414	-	-	-	-	3.00	-	-	-	-	3.00	-	3.00
C415	2.00	-	-	-	2.00	-	-	2.00	-	3.00	-	-

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses :

Course	PSO1	PSO2	PSO3
C101	-	-	-
C102	1.00	1.00	-
C103	-	-	-
C104	-	-	-
C105	-	-	-
C106	-	2	-
C107	-	-	-
C108	-	-	2
C109	-	-	-
C110	-	-	-
C111	1.00	1.00	-
C112	-	-	-
C113	-	-	-
C114	-	-	-
C115	-	2.00	-
C116	-	2.00	-

C117	-	-	-
C145	-	-	-
C201	2	2	-
C202	-	2	-
C203	3	-	-
C204	2	-	-
C205	-	-	2
C206	-	2	
C207	-	-	3
C208	2	-	-
C209	-	-	-
C210	-	2	2
C211	-	2	
C212	-	-	3
C213	2	-	2
C214	2	-	-
C215	2.83	-	-
C216	-	-	2
C217	2.80	-	-
C218	-	2	-
C301	-	2	-
C302	2.83	-	-
C303	-	3	-
C304	-	-	2
C305	-	2	-
C306	-	-	-
C307	-	2	-
C308	3	-	-
C309	-	-	2.40
C310	-	2.83	-
C311	-	-	-
C312	2	-	-
C313	2	2	
C314	2	-	-
C316	-	3	3

C317	-	2.50	2.50
C318	-	-	-
C401	2	-	-
C402	2	2	-
C403	-	2	2
C404	-	-	-
C407	2	2	-
C408	2	2	-
C409	2	2	2
C410	-	-	-
C413	2	2	2
C414	-	3.00	-

3.2 Attainment of Course Outcomes (50)

Total Marks 50.00

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Institute Marks: 10.00

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - Continuous Internal Assessment(CIA)
 - Semester End Examination(SEE)
 - Projects
 - Assignments
- **INDIRECT ASSESSMENT METHODS**
 - Course Exit survey

CO ASSESSMENT PROCESS

The CO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in fig 3.2.1

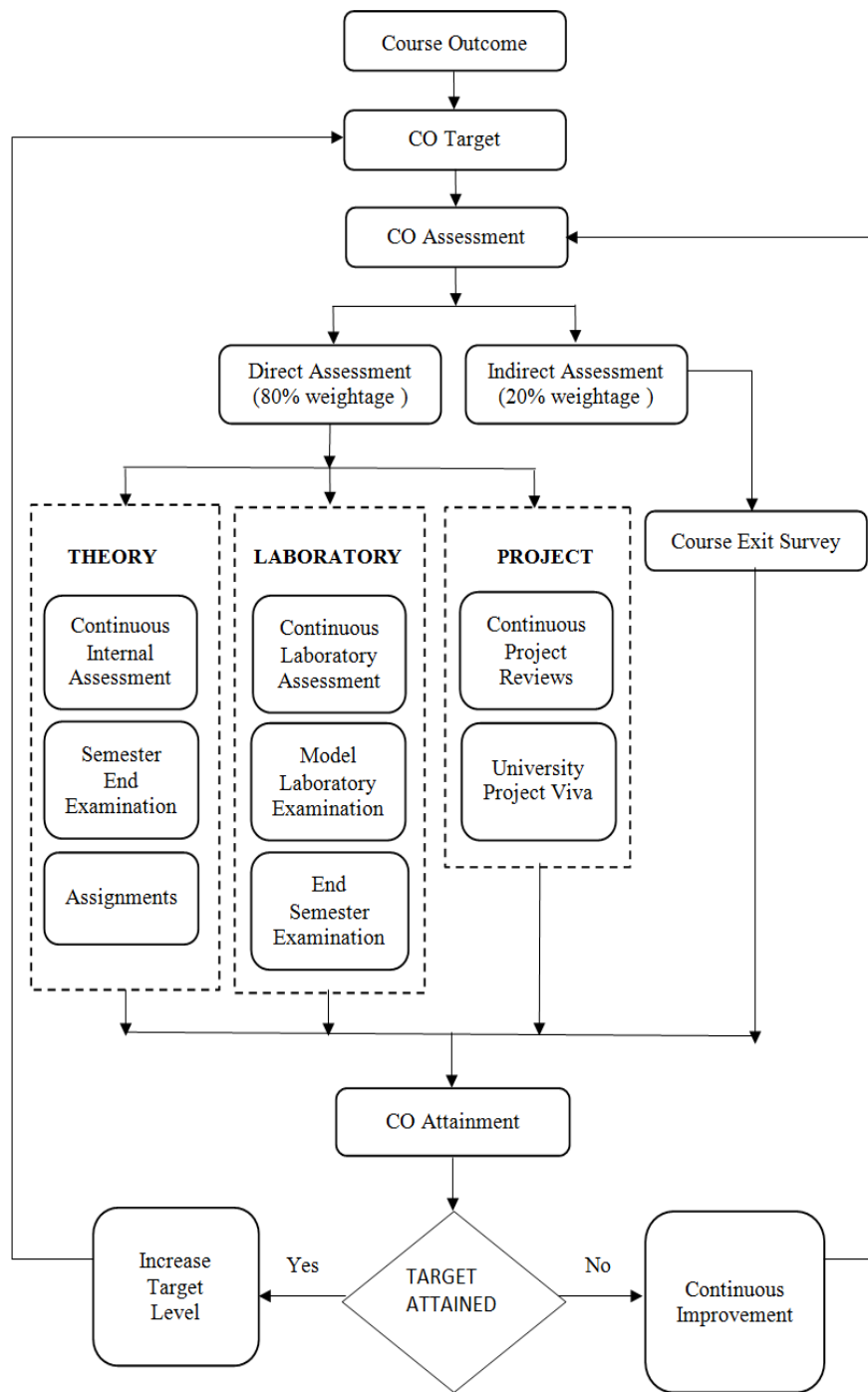


Figure 3.2.1. CO Assessment Process

CO ASSESSMENT METHODOLOGY AND TOOLS

TABLE 3.2.1 (a): CO Assessment Methodology and Tools

Assessing Batch	Assessment methods		Assessment tools	Time interval	Responsible person
	Direct Assessment (80%)				
	Theory courses	Continuous Internal Assessment	Examination	Thrice in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	University
		Assignments	Rubrics	Thrice in a semester	Faculty
	Lab Courses	Continuous Laboratory Assessment	Regular Lab work assessment	Once in a week	Faculty
		Model Laboratory Examination	Examination	Once in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	Faculty
	Project Work	Initial Project Review	Rubrics	Once in Pre-final semester	Project Coordinator
		Continuous Project Reviews	Rubrics	Twice in final semester	Project Coordinator
		University Project Viva	Examination	Once in a semester	University
	Indirect Assessment (20%)				
	Course Exit Survey	Survey	CO based	Once in a semester	Faculty

THE QUALITY /RELEVANCE OF ASSESSMENT PROCESSES & TOOLS USED

Table 3.2.1 (b): Quality /Relevance of assessment process

Assessment Tool	Description/Relevance	Evaluated By
DIRECT ASSESSMENT		
Continuous Internal Assessment (CIA)	<ul style="list-style-type: none"> Continuous Internal Assessment is a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. The questions in Continuous Assessment Examination (CAE) and Model Examination (ME) are mapped against COs of respective courses. The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department. Question Paper scrutiny committee of the department ensures the quality of question papers and coverage of COs. The Question Paper scrutiny committee can either accept or reject or recommend for modification of the framed question paper to ensure the quality of internal question papers. Two Continuous Assessment Examinations and One Model Examination will be conducted for each Course. <ul style="list-style-type: none"> CAE – I :50 marks(CO1 & CO2) CAE – II: 50 marks (CO3 & CO4) ME:100 marks (CO1, CO2, CO3,CO4,CO5,C06) Students secured less than 50% of marks in CAE 1 and having more than 3 arrears in the past University Examinations will be considered as weak students and given remedial classes using simple and smart study material. 	Course faculty
Semester End Examination (SEE)	<ul style="list-style-type: none"> The Semester End Examination is of 3-hour duration which covers the entire Syllabus of the course. It would generally satisfy all course outcomes for the respective courses. 	University Evaluators
Assignments	<ul style="list-style-type: none"> Assignments are given to students to provide practice exposure and knowledge enhancement of the course by the Faculty members concerned. 	Course faculty

	<ul style="list-style-type: none"> Three assignments will be given during the course optionally based on the student's performance analysis for the course by the concerned faculty and evaluated on the basis of rubrics. 	
Laboratory Assessment	<ul style="list-style-type: none"> Lab courses provide hands-on experience with course concepts and an opportunity to explore the technologies used in the domain. Continuous Lab Assessment is based on the lab assessment rubrics which include ability of the students to conduct the prescribed practical work, interpret the result and conclusion, Record Preparation and Submission. Laboratory model examination is conducted similar to the university Practical Examination to assess whether the course outcomes are attained 	Course Faculty
University Practical Examination	<ul style="list-style-type: none"> The university practical examinations are of 3-hours. The evaluation is done by the External Examiner appointed by the university. University Practical Examination assessment is to assess whether the lab course outcomes are attained. 	University Evaluators
Projects	<ul style="list-style-type: none"> Students apply the knowledge gained in the theoretical and practical courses in the implementation of their academic projects Periodical reviews will be conducted to monitor and evaluate the progress of project work. <ul style="list-style-type: none"> Review I : 20 MARKS (CO1 ,CO2 CO7,CO8 & CO9) Review II : 20 MARKS (CO3 , CO4, CO7,CO8 & CO9) Review III: 20 MARKS (CO5 ,CO6,CO7,CO8 & CO9) Each project is evaluated both internally by project rubrics and externally by University and graded according to the quality of project 	Project Supervisor, Internal Examiner and External Examiner.
INDIRECT ASSESSMENT		
Course Exit Survey	On completion of every semester, feedback is Obtained from the students to assess the learning outcomes of the course.	Course Faculty

ATTAINMENT OF COURSE OUTCOME

CO Attainment calculation:

- In the CO attainment calculation for a course, 80% weightage is given to direct assessment and 20% weightage is given to Indirect assessment.

• **Table3.2.1(c): Weightage for CO Attainment calculation**

Assessment type	Percentage
Direct Assessment 1 and 2	80
Indirect assessment (Course Exit Survey)	20

- 60% of the direct assessment is contributed by Semester End Examination and 40% from Continuous Internal Assessment (CIA) for theory courses.
- The 40% contribution from CIA includes Continuous Assessment Examination I Continuous Assessment Examination II ,Model Examination and Assignments
- Assignments will be provided optionally based on the student's performance analysis for the course by the concerned faculty.

● **Table3.2.1(d): Weightage distribution of Direct Assessment for CO Attainment calculation**

Assessment type	Weightage Percentage
Direct Assessment 1 (CAE1,CAE 2, ME & Assignments)	40
Direct Assessment 2 (University Examination)	60

- For Lab courses, 60% of the direct assessment is contributed by Semester End Examination (SEE) and 40% by continuous assessment process.
- The 40% contribution in lab courses by continuous assessment process include continuous assessment of every experiment based on rubrics and model lab examination.
- The percentage of students in the class who scored more than threshold percentage of marks in the respective CO is the attainment.
- The threshold percentage of marks is fixed based on considering the university results for the past 3 years + 5%.
- Indirect Assessment of CO attainment is based on Course Exit Survey.

Direct Attainment

Table 3.2.1 (e): Direct Attainment Calculation

$$\text{Direct Attainment} = \frac{\text{No of students scored more than threshold percentage of marks}}{\text{Total no of students}} \times 100$$

Direct Attainment Levels:

Level 1: If less than 50% of students attained the threshold percentage of marks

Level 2: If 50% to 60% of students attained the threshold percentage of marks

Level 3: If more than 60% of students attained the threshold percentage of marks

Indirect Attainment (Course Exit Survey)

Table 3.2.1 (f): Indirect Attainment Calculation

$$\text{Attainment} = \frac{\sum_{i=1}^5 i * \text{no. of students gave } i \text{ option}}{5 * \text{no. of responses}}$$

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)

Institute Marks : 40.00

The CO attainment for the batch 2016-20 is given below:

Table 3.2.2: CO Target vs Attainment

Course code	CO Target Attainment		CO Attainment								
	Threshold %	Level	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
C201	55	2	2.2	2.52	2.52	2.52	2.52	2.52	-	-	-
C202	55	2	2.52	2.52	2.52	2.52	2.52	2.52	-	-	-
C203	55	2	2.68	3	3	3	3	2.68	-	-	-
C204	55	2	1.72	2.04	2.04	2.04	2.04	2.04	-	-	-
C205	55	2	2.52	2.52	2.52	2.52	2.52	2.52	-	-	-
C206	55	2	3	3	3	3	3	3	-	-	-
C207	55	2	3	3	3	3	3	-	-	-	-
C208	55	2	3	3	3	3	3	-	-	-	-
C209	55	2	3	3	3	3	3	-	-	-	-
C210	55	2	3	3	3	3	3	3	-	-	-
C211	55	2	1.72	2.04	2.04	2.04	2.04	2.04	-	-	-
C212	55	2	2.52	2.2	2.2	2.52	2.2	2.2	-	-	-

C213	55	2	2.68	3	3	3	3	3	-	-	-
C214	55	2	2.68	3	3	3	3	3	-	-	-
C215	55	2	2.68	3	2.68	3	3	2.68	-	-	-
C216	55	2	3	3	3	3	3	-	-	-	-
C217	55	2	3	3	3	3	3	-	-	-	-
C218	55	2	3	3	3	3	3	-	-	-	-
C301	55	2	2.68	3	3	3	3	3	-	-	-
C302	55	2	2.52	2.52	2.52	2.52	2.52	2.52	-	-	-
C303	55	2	2.04	2.04	2.04	2.04	1.72	2.04	-	-	-
C304	55	2	3	3	3	3	3	3	-	-	-
C305	55	2	2.2	2.52	2.2	2.52	2.52	2.2	-	-	-
C306	55	2	2.68	3	3	3	3	3	-	-	-
C307	55	2	3	3	3	3	3	-	-	-	-
C308	55	2	3	3	3	3	3	-	-	-	-
C309	55	2	3	3	3	3	3	-	-	-	-
C310	55	2	3	3	3	3	3	3	-	-	-
C311	55	2	2.68	2.68	3	3	3	3	-	-	-
C312	55	2	2.68	3	3	3	3	3	-	-	-
C313	55	2	1.72	2.04	2.04	2.04	2.04	2.04	-	-	-
C314	55	2	3	3	3	3	3	3	-	-	-
C316	55	2	3	3	3	3	3	-	-	-	-
C317	55	2	3	3	3	3	3	3	-	-	-
C318	55	2	3	3	3	3	3	-	-	-	-
C401	55	2	3	3	3	3	3	2.36	-	-	-
C402	55	2	2.52	2.52	2.52	2.52	2.52	2.2	-	-	-
C403	55	2	1.72	2.04	2.04	2.04	2.04	2.04	-	-	-
C404	55	2	3	3	3	3	3	3	-	-	-
C407	55	2	3	3	3	3	3	-	-	-	-
C408	55	2	3	3	3	3	3	-	-	-	-

C409	55	2	3	3	3	3	3	-	-	-	-
C410	55	2	3	3	3	3	3	2.68	-	-	-
C413	55	2	3	3	3	3	3	3	3	3	3

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 50.00

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10) Institute Marks : 10.00

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - **CO-PO&PSO Attainment**
 - Academic Courses
 - value added course
 - Technical Seminar
- **INDIRECT ASSESSMENT METHODS**
 - **SURVEYS**
 - Program Exit survey
 - Employer Survey

PO & PSO- ASSESSMENT PROCESS

The CO-PO&PSO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in Figure 3.3.1

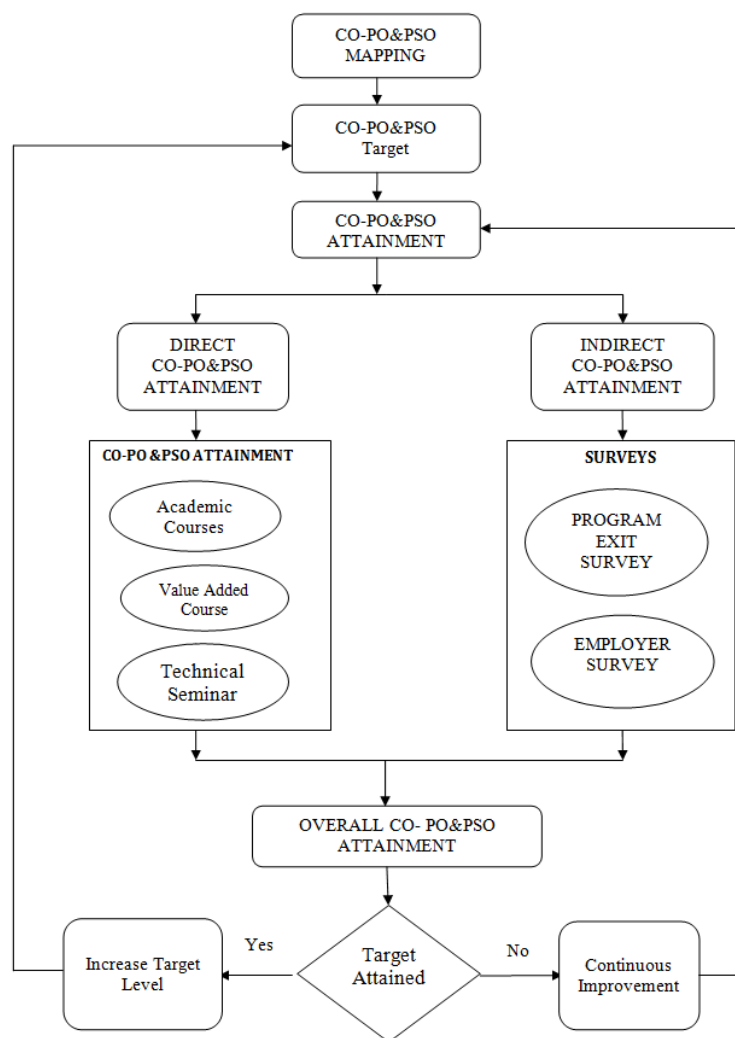


Figure 3.3.1: Co-PO & PSO Assessment Process

CO-PO & PSO ASSESSMENT PROCESS

- The CO-PO&PSO attainment is computed through direct and indirect assessment process. The direct part is computed through the attainment of COs from all academic courses, value added course and Technical seminar.
- The indirect attainments of the POs are computed through Program Exit Survey and Employer Survey among stakeholders.
- The overall attainment of outcomes of a program (POs) is computed by adding direct attainment and indirect attainment values in the proportion ratio of 80:20.
- That is, 80% of direct attainment and 20% of indirect attainment is taken into consideration.
- PO/PSO Attainment is computed based on the following expression:

Table3.3.1 (a): PO/PSO attainment calculation

Direct	Attainment of PO/PSO through a Course:
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	$PO_{ij} \text{ Attainment} = \frac{\sum_{k=1}^{CO_{max}} CA_k * MS}{n * NCO}$ <p>Where, PO_{ij} is the Attainment of 'i' th PO through the course 'j'</p> <p>CA_k is the Attainment value of CO_k</p> <p>MS is the mapping strength of corresponding course outcome to which PO_i is addressed</p> <p>n is the maximum possible mapping strength</p> <p>NCO is the number of all associated COs for PO_i</p> <p>Attainment of PO/PSO through all courses</p> <p>Poi Attainment = Average across all Courses Addressing that POs/PSOs</p>
Indirect	$PO_i = \frac{\sum_{i=1}^5 i * \text{no. of students gave i option}}{5 * \text{no. of responses}}$ <p>Where, PO_i is the attainment of the 'i' th PO</p>

THE QUALITY/RELEVANCE OF ASSESSMENT TOOLS/PROCESSES USED

Table 3.3.1 (b): Quality /Relevance of PO/PSO assessment process

Assessment Tool	Description	Evaluated By	Frequency
DIRECT ASSESSMENT			
CO-PO & PSO Attainment	<ul style="list-style-type: none"> The overall CO-PO&PSO Attainment is based on the average attainment of all associated academic courses, value added course and Technical seminar The value added course is conducted in the 5th semester of the program and continuous assessment of value added course is based on assessment rubrics which include ability of the 	Course Faculty/ PAC	End of semester, for all courses.

	<p>students to use modern tools, effective technical communication and lifelong learning.</p> <ul style="list-style-type: none"> Technical seminar is conducted in the 7th semester of the program and evaluated using assessment rubrics which include ability of the students to apply Engineering knowledge, use modern tools, apply ethical principles, effective technical communication and lifelong learning. 		
INDIRECT ASSESSMENT			
Program Exit Survey	<ul style="list-style-type: none"> Program Exit Survey is conducted for students who have graduated out of the department for that year. Evaluation parameters are formulated in the Program Exit Survey form to evaluate attainment of POs and PSOs. Each evaluation parameter has one to five ratings. The survey results are tabulated and the average values corresponding to each PO and PSO are determined. 	PAC	End of the Program
Employer feedback	<ul style="list-style-type: none"> Feedback from the employers of students is taken to assess the attainment of POs and PSOs Evaluation parameters are formulated in the employer survey form to evaluate attainment of POs and PSOs Each evaluation parameter has one to five ratings. The survey results are tabulated and the average values corresponding to each PO and PSO are determined. 	PAC	End of the Program

3.3.2 Provide results of evaluation of PO&PSO (40)

PO Attainment

Table 3.3.2 (a) Direct Attainment of POs for **2016- 2020 batch**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C201	2.47	1.64	0.82	-	-	-	-	-	-	-	-	-
C202	2.52	1.68	0.84	-	-	-	-	-	-	1.68	-	-
C203	2.89	1.93	0.96	-	-	-	-	-	-	-	-	1.79
C204	1.99	1.32	0.66	1.32	-	-	-	-	-	-	-	1.36
C205	1.68	0.84	-	-	-	-	1.68	-	-	-	-	1.68

C206	2.00	1.00	-	-	-	2.00	-	-	-	-	-	-
C207	2.00	-	-	-	-	-	-	-	2.00	2.00	-	2.00
C208	2.00	1.00	-	2.00	-	-	-	-	2.00	2.00	-	-
C209	2.00	-	-	2.00	-	-	-	-	2.00	2.00	-	-
C210	3.00	2.00	1.00	2.00	-	-	-	-	-	-	-	2.00
C211	1.89	1.23	0.68	-	-	-	-	-	-	-	-	1.36
C212	1.66	0.77	-	-	1.47	-	-	-	-	-	-	1.54
C213	1.96	0.98	-	-	-	-	2.00	-	-	-	-	2.00
C214	1.96	-	-	-	-	2.30	2.95	-	-	-	-	1.96
C215	2.67	1.73	0.94	0.95	-	-	2.00	-	-	-	-	-
C216	2.00	-	-	-	2.00	-	-	-	2.00	2.00	-	-
C217	2.60	2.00	1.00	2.00	2.00	-	1.00	-	2.00	-	-	-
C218	2.00	-	-	2.00	-	-	2.00	-	2.00	2.00	-	-
C301	1.96	0.98	-	-	1.96	-	-	-	-	1.96	-	1.96
C302	2.38	1.68	1.01	1.68	-	-	-	-	-	-	-	1.68
C303	1.87	1.21	1.21	-	-	1.32	-	-	-	1.32	-	1.32
C304	2.00	1.00	-	-	2.00	-	-	-	-	-	-	2.00
C305	2.36	1.57	0.79	-	-	-	-	-	-	-	-	1.57
C306	-	-	-	-	-	2.00		2.95	-	-	-	-
C307	2.00	-	-	2.00	-	-	-	-	2.00	2.00	-	2.00
C308	3.00	2.00	1.00	2.00	-	-	-	-	2.00	2.00	-	-
C309	2.00	1.00		2.00	2.00	-	-	-	2.00	2.00	-	-
C310	3.00	2.00	2.00	-	-	2.00	-	-	-	2.00	-	2.00
C311	-	-	-	-	-	-	-	2.00	2.69	2.00	3.00	1.91
C312	1.96	0.98	-	-	-	2.00	2.00	-	-	-	-	1.96

C313	1.89	1.23	0.68	1.36	1.31	-	-	-	-	-	-	1.36
C314	3.00	2.00	1.00	-	-	-	-	-	-	-	-	2.00
C316	2.00	-	-	-	3.00	-	-	-	-	2.00	-	2.00
C317	2.33	3.00	3.00	-	2.00	3.00	-	2.00	3.00	3.00	3.00	2.00
C318	-	-	-	-	-	-	-	-	2.00	2.60	-	2.00
C401	1.93	0.96	-	-	-	3.00	3.00	-	-	-	-	1.79
C402	1.64	0.82	-	-	1.57	-	-	-	-	-	-	1.61
C403	1.44	0.78	0.68	-	0.89	-	-	-	-	1.29	1.36	1.36
C404	-	-	-	-	-	2.00	-	2.00	2.25	2.00	-	1.67
C407	2.80	2.20	1.50	2.00	3.00	-	-	-	-	2.00	-	2.00
C408	3.00	2.20	1.20	1.00	3.00	-	-	-	2.00	2.00	-	2.00
C409	2.00	-	-	-	-	-	-	-	-	2.00	-	-
C410	1.96	0.98	-	-	-	-	-	-	-	-	1.96	2.00
C413	3.00	3.00	2.33	1.50	3.00	2.00	2.00	2.00	3.00	2.67	3.00	2.00
C414	-	-	-	-	3.00	-	-	-	-	3.00	-	3.00
C415	2	-	-	-	2	-	-	2	-	3	-	-

PO Attainment Level

Table 3.3.2 (b) Overall attainment of POs for **2016- 2020 batch**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.37	1.79	1.53	1.98	2.31	2.33	2.26	2.33	2.36	2.28	2.57	2.07
Direct Attainment	2.22	1.49	1.17	1.72	2.14	2.16	2.07	2.16	2.20	2.11	2.46	1.84
InDirect Attainment	3	3	3	3	3	3	3	3	3	3	3	3

PSO Attainment

Table 3.3.2 (c) Direct Attainment of PSOs for **2016- 2020 batch**

Course	PSO1	PSO2	PSO3
C201	1.64	1.57	-
C202	-	1.68	-
C203	2.89	-	-
C204	1.32	-	-
C205	-	-	1.68
C206	-	2.00	
C207	-	-	3.00
C208	2.00	-	-
C209	-	-	-
C210	-	2.00	2.00
C211	-	2.00	-
C212	-	-	2.31
C213	2.00	-	1.96
C214	2.00	-	-
C215	2.67	-	-
C216	-	-	2.00
C217	2.80	-	-
C218	-	2.00	-
C301	-	1.96	-
C302	2.38	-	-
C303	-	1.99	-
C304	-	-	2.00
C305	-	1.57	-
C306	-	-	-
C307	-	2.00	-
C308	3.00	-	-
C309	-	-	2.40
C310	-	2.83	-
C311	-	-	-
C312	2.00	-	-
C313	1.32	1.32	-
C314	2.00	-	-
C316	-	3.00	3.00
C317	-	2.50	2.50
C318	-	-	-

C401	1.91	-	-
C402	1.64	1.64	-
C403	-	1.15	1.32
C404	-	-	-
C407	2.00	2.00	-
C408	2.00	2.00	-
C409	2.00	2.00	2.00
C410	-	-	-
C413	2.00	2.00	2.00
C414	-	3.00	-
C415	-	-	-

PSO Attainment Level

Table 3.3.2 (d) Overall attainment of PSOs for **2016- 2020 batch**

Course	PSO1	PSO2	PSO3
CO Attainment	2.27	2.21	2.33
Direct Attainment	2.08	2.01	2.17
InDirect Attainment	3	3	3

CRITERION 4	Student's Performance	150
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4. STUDENTS' PERFORMANCE (150)

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2020 - 21(CAY)	2019-20 (CAYm1)	2018-19 (CAYm2)	2017-18(CAYm3)	2016-17(CAYm4)	2015-16 (CAYm5)	2014-15 (CAYm6)
Sanctioned intake of the program(N)	120	120	120	120	120	120	120
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	52	74	95	115	113	120	120
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	26	14	9	14	15	13	15
Separate division students, If applicable (N3)	0	0	1	6	0	1	1
Total number of students admitted in the program (N1 + N2 + N3)	78	88	105	135	128	134	136

Table 4.2

Year of entry	N1+N2+N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year

CAY 2020-2021	52+26+0=78				
CAYm1 (2019-2020)	74+14+0=88	13			
CAYm2 (2018-2019)	95+9+1 = 105	4	5		
CAYm3 (2017-2018)	115+14+6 = 135	16	5	3	
CAYm4 (LYG) (2016-2017)	113+15+0 = 128	16	9	9	9
CAYm5(LYGm1) (2015-2016)	120+13+1=134	38	22	12	11
CAYm6(LYGm2) (2014-2015)	120+15+1=136	62	37	17	11

Table.4.3

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)			
		I Year	II Year	III Year	IV Year
CAY 2020-2021	52+26+0=78				
CAYm1 (2019-2020)	74+14+0=88	74			
CAYm2 (2018-2019)	95+9+1 = 105	23	105		
CAYm3 (2017-2018)	115+14+6 = 135	40	17	132	
CAYm4 (LYG) (2016-2017)	113+15+0 = 128	61	44	35	128
CAYm5(LYGm1) (2015-2016)	120+13+1=134	118	82	68	64

CAY _m 6(LYG _m 2) (2014-2015)	120+15+1=136	105	96	85	80
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4.1. Enrolment Ratio (20)

Year	N	N1	Enrollment ratio [(N1/N)*100]
2020-2021(CAY)	120	52	43.33
2019-2020(CAYm1)	120	74	61.66
2018-2019(CAYm2)	120	95	79.16

Average [(ER1+ER2+ER3)/3]: 61.38

Institute Marks: 14.00

4.2 Success Rate in the stipulated period of the program (40)

4.2.1 Success rate without backlogs in any semester/year of study (25)

Item	2016-2017(LYG)	Last Year of Graduat, (LYGm1) 2015-2016	Last Year of Graduate minus 1, (LYGm2) 2014-2015
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	128	134	136
Number of students who have graduated without backlogs in the stipulated period	9	11	11
Success Index (SI)	0.07	0.0829	0.08088

Average SI [(SI1 + SI2 + SI3) / 3]: 0.0779

Assessment [25 * Average SI]: 1.94

4.2.2 Success rate with backlog in stipulated period of study (15)

Item	Last Year of Graduate 2016-2017(LYG)	Last Year of Graduate minus 12015-2016) LYGm1	, Last Year of Graduate minus 2 2014-2013) LYGm2
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	128	134	136
Number of students who have graduated with backlog in the stipulated period	125	53	69
Success Index (SI)	0.976	0.3955	0.5073

Average SI[(SI1 + SI2 + SI3) / 3]: 0.6262

Assessment [15 * Average SI]: 9.393

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously

4.3. Academic Performance in Third Year(15)

Total Marks 9.342

Academic Performance	CAYm3(2017-18)	LYG (2016-17)	LYGm1 (2015-16)
Mean of CGPA or Mean Percentage of all successful students (X)	7.965	5.12	5.6
Total no. of successful students (Y)	121	128	129
Total no. of students appeared in the examination (Z)	121	128	129
API = x* (Y/Z)	7.965	5.12	5.6

Average API [(AP1 + AP2 + AP3)/3] : 6.228

Assessment [1.5 * AverageAPI] : 9.342

4.4 Academic Performance in Second Year(15)

Academic Performance	CAYm2 (2018 - 19)	CAYm3 (2017- 18)	LYG (2016- 17)
Mean of CGPA or Mean Percentage of all successful students (X)	7.8	4.43	5.125
Total no. of successful students (Y)	90	121	128
Total no. of students appeared in the examination (Z)	90	134	131
API = $X * (Y/Z)$	7.8	4.000224	5.007634

Average API $[(AP1 + AP2 + AP3)/3]$: 5.6

Assessment $[1.5 * \text{Average API}]$: 8.4

4.5 Placement, Higher Studies and Entrepreneurship (40)

Item	LYG (2016- 17)	LYG m1 (2015- 16)	LYG m2 (2014- 15)
Total No of Final Year Students(N)	128.00	129.00	123.00
No of students placed in the companies or government sector(X)	51.00	104.00	100.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	8.00	3.00	2.00
No of students turned entrepreneur in engineering/technology (Z)	1.00	2.00	-
$x + y + z =$	60.00	109.00	102.00
Placement Index $[(X+Y+Z)/N]$:	0.46875	0.8449 61	0.8292 68

Average Placement $[(P1 + P2 + P3)/3]$: 0.714

Assessment $[40 * \text{Average Placement}]$: 28.56

4.5. (a) Provide the placement data in the below mentioned format with the name of the program and the assessment year:

Programs name: B.E MECHANICAL ENGINEERING

Assessment Year: CA Ym1 (2020-2021)

SI No	Enrolment number	Name of the student	Name of the Employer	Reference Number
1	961416114005	ABIN S	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/012
2	961416114006	ABIN SAM ABRAHAM	CHARA TECHNOLOGIES CHENNAI	CT/GD/218
3	961416114007	AGABOS M JACOB	LGB COIMBATORE	LGB/017/11/016
4	961416114008	AHIN T A	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/013
5	961416114010	AJASHA J A	CHARA TECHNOLOGIES CHENNAI	CT/GD/219
6	961416114011	AJESH B S	LGB COIMBATORE	LGB/017/11/017
7	961416114012	AJIN J RAJENDRAN	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/014
8	961416114013	AJIN P RAJ	CHARA TECHNOLOGIES CHENNAI	CT/GD/220
9	961416114014	AJITH KUMAR R	LGB COIMBATORE	LGB/017/11/018
10	961416114016	AKHIL K SHIBU	LGB COIMBATORE	LGB/017/11/019
11	961416114017	AKHILNATH S S	TVS CHENNAI	TVS/CH/066
12	961416114018	AKHIL P JOSE	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/015
13	961416114019	AKHIL RAJ P	CHARA TECHNOLOGIES CHENNAI	CT/GD/221
14	961416114020	AKILAN H	TVS CHENNAI	TVS/CH/067

15	961416114021	AKSHAY V NAIR	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/016
16	961416114022	ALAN ALEX	TVS CHENNAI	TVS/CH/068
17	961416114029	AMAL V SKARIA	TVS CHENNAI	TVS/CH/069
18	961416114030	ANANDHU LAL	LGB COIMBATORE	LGB/017/11/020
19	961416114031	ANISH P	LGB COIMBATORE	LGB/017/11/021
20	961416114032	ANISH THOMAS	TVS CHENNAI	TVS/CH/070
21	961416114033	ANSLY NITHIN S	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/017
22	961416114034	ANTO RUFUS G	TVS CHENNAI	TVS/CH/071
23	961416114035	ARAVIND A KURUP	TVS CHENNAI	TVS/CH/072
24	961416114036	ARAVIND GOPAL M J	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/018
25	961416114037	ARAVINDHU M	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/019
26	961416114038	ARJUNAN K	CHARA TECHNOLOGIES CHENNAI	CT/GD/222
27	961416114040	ASHIK SAJI JOHN	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/020
28	961416114042	BENISH JEBIN S	LGB COIMBATORE	LGB/017/11/022
29	961416114044	BIBIN FRANCIS	TVS CHENNAI	TVS/CH/073
30	961416114050	FELIX JOHN THOMAS	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/021
31	961416114051	GAUTHAM KRISHNA	LGB COIMBATORE	LGB/017/11/023
32	961416114054	JAISON J THARAKAN	LGB COIMBATORE	LGB/017/11/024
33	961416114055	JEFFIN BINU JOHN	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/022

34	961416114057	JESBIN JACOB KURIAN	LGB COIMBATORE	LGB/017/11/025
35	961416114058	JILLS GEEVARUGHESE SIMON	LGB COIMBATORE	LGB/017/11/026
36	961416114059	JINO MON M	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/023
37	961416114060	JITHIN M ABEY	CHARA TECHNOLOGIES CHENNAI	CT/GD/223
38	961416114308	MUHAMMED HASINSHA P S	CHARA TECHNOLOGIES CHENNAI	CT/GD/224
39	961416114309	PRINCE RAJU	CHARA TECHNOLOGIES CHENNAI	CT/GD/225
40	961416114310	RENJITH R	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/024
41	961416114061	JITHU JOSE	CHARA TECHNOLOGIES CHENNAI	CT/GD/226
42	961416114062	JOBIN GEORGE	LGB COIMBATORE	LGB/017/11/027
43	961416114063	JOBIN JOSE	CHARA TECHNOLOGIES CHENNAI	CT/GD/227
44	961416114064	JOBIN T EAPEN	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/025
45	961416114065	JOEL KURUVILLA MATHEW	LGB COIMBATORE	LGB/017/11/028
46	961416114066	JOMON M	CHARA TECHNOLOGIES CHENNAI	CT/GD/228
47	961416114067	JUSTIN NOYAL	LGB COIMBATORE	LGB/017/11/029
48	961416114068	KEVIN J MATHEW	LGB COIMBATORE	LGB/017/11/030
49	961416114069	KIRAN KRISHNA	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/026
50	961416114070	MELVIN SAJI	LGB COIMBATORE	LGB/017/11/031

51	961416114071	MIDHUN BIJU	TRIANGLE ENGINEERING, COIMBATORE	TEC/20/027
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Assessment year: CAYm2 (2019-2020)

SI No	Enrolment number	Name of the student	Name of the Employer	Reference Number
1	961415114002	ABI BLESSING M	Chara Technologies, CHENNAI	CT/GD/151
2	961415114003	ABIN ABRAHAM SAJI	NECCO TOOLS,CHENNAI	NT/CH/19/077
3	961415114004	ABIN BONI PIOUS	Chara Technologies, CHENNAI	CT/GD/152
4	961415114005	ABINESH M	TVS Sundaram, Pondichery	22/03/19
5	961415114006	ABIN G VARGHESE	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/055
6	961415114007	ABIN K WILSON	TVS Sundaram, Pondichery	22/03/19
7	961415114008	ABIN S L	SVR Industries, Cuddalore	SVR/PD/19/23
8	961415114009	ABIN V BABU	Chara Technologies, CHENNAI	CT/GD/153
9	961415114010	ABISHAKE E L	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/056
10	961415114011	ABISHEK Y	Chara Technologies, CHENNAI	CT/GD/154
11	961415114012	ABISH RAJ P	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/057
12	961415114013	AJAY ANTONY	NECCO TOOLS,CHENNAI	NT/CH/19/078
13	961415114015	AJIN J S	NECCO TOOLS,CHENNAI	NT/CH/19/079
14	961415114016	AJIN R	SVR Industries, Cuddalore	SVR/PD/19/24
15	961415114017	AJIN R S	SVR Industries, Cuddalore	SVR/PD/19/25
16	961415114018	AJIN W	TVS Sundaram, Pondichery	22/03/19

17	961415114019	AJITH S	Parascadd, Mumbai	15/04/19
18	961415114020	AJITH V	Parascadd, Mumbai	15/04/19
19	961415114022	AKHIL V	NECCO TOOLS,CHENNAI	NT/CH/19/080
20	961415114023	ALEN VARGHESE	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/058
21	961415114025	AMAL K JOHN	Parascadd, Mumbai	15/04/19
22	961415114026	AMAL RAJU	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/059
23	961415114028	ANISH M	NECCO TOOLS,CHENNAI	NT/CH/19/081
24	961415114029	ANISH M S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/060
25	961415114030	ANISH SHURBIN A S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/061
26	961415114031	ANSON K SAJU	SVR Industries, Cuddalore	SVR/PD/19/26
27	961415114032	ANUSHANTH P R	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/062
28	961415114033	ARUN X	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/063
29	961415114034	ASHIK S P	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/064
30	961415114035	ASHIN V JOHN	NECCO TOOLS,CHENNAI	NT/CH/19/082
31	961415114038	ATHUL S	Chara Technologies, CHENNAI	CT/GD/155
32	961415114040	BERGER R M	SVR Industries, Cuddalore	SVR/PD/19/27
33	961415114041	BHARATH U K	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/065
34	961415114042	BIBIN BABY	Chara Technologies, CHENNAI	CT/GD/156
35	961415114044	BIBIN BIJU (03-03-1998)	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/066
36	961415114045	BIJIN GEORGE PHILIP	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/067

37	961415114047	BINU P R	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/068
38	961415114048	CHRISTIN JOSEPH	NECCO TOOLS,CHENNAI	NT/CH/19/083
39	961415114049	DENNY JOHNSON	NECCO TOOLS,CHENNAI	NT/CH/19/084
40	961415114050	EBIN E M	Essel,Poland	03/06/20
41	961415114051	EMIL KURIKESU	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/069
42	961415114052	FEBIN ROY	SVR Industries, Cuddalore	SVR/PD/19/28
43	961415114053	GANESH VARMA R	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/070
44	961415114054	JAISON JOSEPH	SVR Industries, Cuddalore	SVR/PD/19/29
45	961415114055	JANO MARS C	SVR Industries, Cuddalore	SVR/PD/19/30
46	961415114056	JAYAJITH K V	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/071
47	961415114057	JEBIN J	SVR Industries, Cuddalore	SVR/PD/19/31
48	961415114058	JEEJO SAMUEL JOSE	Chara Technologies, CHENNAI	CT/GD/157
49	961415114061	JENIN REJI	Chara Technologies, CHENNAI	CT/GD/158
50	961415114063	JIBIN EASOW JAMES	TVS Sundaram, Pondichery	22/03/19
51	961415114064	JIBIN J	TVS Sundaram, Pondichery	22/03/19
52	961415114065	JIBIN JOSE T	SVR Industries, Cuddalore	SVR/PD/19/32
53	961415114066	JIBIN RAJI KOSHY	Parascadd, Mumbai	15/04/19
54	961415114067	JIBU CHANDY JACOB	Chara Technologies, CHENNAI	CT/GD/159
55	961415114068	JISHAN T	Chara Technologies, CHENNAI	CT/GD/160
56	961415114070	JITHIN JOSE (12- 08-1997)	Essel,Poland	03/06/20
57	961415114072	JOBIN JOSE	TVS Sundaram, Pondichery	22/03/19
58	961415114073	JOBIN REJI	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/072
59	961415114078	LAFI D	Essel,Poland	03/06/20
60	961415114079	LIBIN SAM S	SVR Industries, Cuddalore	SVR/PD/19/33

61	961415114084	NIVAS SARATH BABU G	SVR Industries, Cuddalore	SVR/PD/19/34
62	961415114086	PRASANTH B	Chara Technologies, CHENNAI	CT/GD/161
63	961415114087	REJIN RAJAN	SVR Industries, Cuddalore	SVR/PD/19/35
64	961415114088	RENJITH KUMAR S R	SVR Industries, Cuddalore	SVR/PD/19/36
65	961415114090	REUBEN M RAJAN	Chara Technologies, CHENNAI	CT/GD/162
66	961415114094	ROJIN ROY	TVS Sundaram, Pondichery	22/03/19
67	961415114096	RON ROY	Chara Technologies, CHENNAI	CT/GD/163
68	961415114097	SACHIN SUBASH	Chara Technologies, CHENNAI	CT/GD/164
69	961415114098	SACHU MATHEW VARUGHESE	Chara Technologies, CHENNAI	CT/GD/165
70	961415114099	SAJIN S	SVR Industries, Cuddalore	SVR/PD/19/37
71	961415114101	SAJU SAM	TVS Sundaram, Pondichery	22/03/19
72	961415114102	SAM RAJ S S	Parascadd, Mumbai	15/04/19
73	961415114103	SAM ZACHARIA EAPPEN	Chara Technologies, CHENNAI	CT/GD/166
74	961415114104	SARAN C	Chara Technologies, CHENNAI	CT/GD/167
75	961415114105	SATHEESH R A	CADD CENTRE	01/03/19
76	961415114106	SHEJIN RAJ S	TVS Sundaram, Pondichery	22/03/19
77	961415114107	SHIBU S	Chara Technologies, CHENNAI	CT/GD/168
78	961415114108	SHIJUMON R S	Chara Technologies, CHENNAI	CT/GD/169
79	961415114109	SIBIN B	SVR Industries, Cuddalore	SVR/PD/19/38
80	961415114110	SIBIN SAMUEL	Chara Technologies, CHENNAI	CT/GD/170
81	961415114111	SIBIN S DANIEL	Chara Technologies, CHENNAI	CT/GD/171
82	961415114112	SIJIN R S	Essel,Poland	03/06/20
83	961415114113	SMRITHY MOHAN K	Chara Technologies, CHENNAI	CT/GD/172
84	961415114114	STEBIN RAJ S	CADD CENTRE	01/03/19
85	961415114117	VAISHAK M	Chara Technologies, CHENNAI	CT/GD/173

86	961415114119	VIPIN WILSON	TVS Sundaram, Pondichery	22/03/19
87	961415114120	XAVIER LOUIS POWATH	Chara Technologies, CHENNAI	CT/GD/174
88	961415114301	ABISH RAJ S L	Chara Technologies, CHENNAI	CT/GD/175
89	961415114303	ANOOP S S	SVR Industries, Cuddalore	SVR/PD/19/39
90	961415114304	ANUROSH CHANDRAN	CADD CENTRE	01/03/19
91	961415114305	ARUN A S	CADD CENTRE	01/03/19
92	961415114306	ASHIN S A SIRIL	SVR Industries, Cuddalore	SVR/PD/19/40
93	961415114307	BENIN KADAKSHAM D S	SVR Industries, Cuddalore	SVR/PD/19/41
94	961415114309	JINO S N	Chara Technologies, CHENNAI	CT/GD/176
95	961415114310	MARTIN MANO J S	TVS Sundaram, Pondichery	22/03/19
96	961415114311	NISHANTH C	Chara Technologies, CHENNAI	CT/GD/177
97	961415114312	PRINSON VARGHESE	Chara Technologies, CHENNAI	CT/GD/178
98	961415114313	SAJIN DAS D	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/073
99	961415114314	VINEESH S P	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T11/074
100	961415114315	VIPIN VARUGHESE	Chara Technologies, CHENNAI	CT/GD/179
101	961415114701	ASHA V R	CADD CENTRE	01/03/19
102	961415114702	JOSE VIVEK WILFRED	CADD CENTRE	01/03/19
103	961415114703	AGIN R C	Chara Technologies, CHENNAI	CT/GD/180
104	961415114704	JOBIN THOMAS	SVR Industries, Cuddalore	SVR/PD/19/42

Assessment year: CAYm3 (2018-2019)

SI No	Enrolment number	Name of the student	Name of the Employer	Reference Number
1	961414114001	ABRAHAM PHILIP	Chara Technologies, CHENNAI	CT/GD/121

2	961414114002	AIBIN JOSEPH	NECCO TOOLS,CHENNAI	NT/CH/18/05 2
3	961414114003	AJIN SAJI	ESSEL , POLAND	07/05/18
4	961414114004	AJIN T M	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-086
5	961414114005	AJI R	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/074
6	961414114006	AKASH MATHEW T	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-087
7	961414114007	AKHIL JAYAPRAKASH	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-088
8	961414114008	AKHIL JIJ THOMAS	NECCO TOOLS,CHENNAI	NT/CH/18/05 3
9	961414114009	AKHIL JOY	Chara Technologies, CHENNAI	CT/GD/122
10	961414114010	AKHIL K ANIYAN	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/18 1
11	961414114011	AKHIL THOMAS	Chara Technologies, CHENNAI	CT/GD/123
12	961414114012	AKSHAI ANIL	NECCO TOOLS,CHENNAI	NT/CH/18/05 4
13	961414114014	ALEX A	NECCO TOOLS,CHENNAI	NT/CH/18/05 5
14	961414114015	ALEX N	NECCO TOOLS,CHENNAI	NT/CH/18/05 6
15	961414114017	AMAL B ALEX	Chara Technologies, CHENNAI	CT/GD/124
16	961414114020	ANISH R	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/18 2
17	961414114022	ANOOP VARGHESE	NECCO TOOLS,CHENNAI	NT/CH/18/05 7
18	961414114023	ARAVIND B	Chara Technologies, CHENNAI	CT/GD/125
19	961414114024	ARAVIND T R	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/18 3

20	961414114025	ARUN PHILIP	NECCO TOOLS,CHENNAI	NT/CH/18/058
21	961414114026	ARUN SEBASTIAN	SVR Industries,Cuddalore	SVR/PD/18/18
22	961414114027	ASHISH P NAIR	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/184
23	961414114028	BEN RAJU KOSHY	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/185
24	961414114029	BEN SAMUEL ABRAHAM	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-089
25	961414114030	BIJO PRAKASH B J	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/075
26	961414114031	BINSO THOMAS	SVR Industries,Cuddalore	SVR/PD/18/19
27	961414114032	BOBBY THOMAS	SVR Industries,Cuddalore	SVR/PD/18/20
28	961414114033	BREEZE S R	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/186
29	961414114034	BYJU S	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/187
30	961414114036	CRUZ STELGIN M	Chara Technologies, CHENNAI	CT/GD/126
31	961414114037	DALBIN T	NECCO TOOLS,CHENNAI	NT/CH/18/059
32	961414114038	DEFFIN ISSAC D	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-090
33	961414114039	DIJI D	ESSEL , POLAND	07/05/18
34	961414114040	EBINESH R	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/076
35	961414114041	EBIN THANKACHAN	Chara Technologies, CHENNAI	CT/GD/127
36	961414114042	EUGIN BERNADS T	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-091

37	961414114043	GEMIN P GEORGE	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/077
38	961414114044	GOKUL SUNDARESAN	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-092
39	961414114045	JAIS JACOB	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/078
40	961414114046	JEBA SINGH S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/079
41	961414114047	JEFFRIN J P	NECCO TOOLS,CHENNAI	NT/CH/18/06 0
42	961414114048	JENSILIN RAJ T	SVR Industries,Cuddalore	SVR/PD/18/2 1
43	961414114049	JENSON JACOB	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/18 8
44	961414114050	JIBIN J	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/080
45	961414114051	JIBIN JOJI SKARIAH	SVR Industries,Cuddalore	SVR/PD/18/2 2
46	961414114052	JIBIN VARGHESE	SVR Industries,Cuddalore	SVR/PD/18/2 3
47	961414114054	JOBIN JOSE VARGHESE	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/18 9
48	961414114055	JOBIN SHAJI THOMAS	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-093
49	961414114057	JOEL E JOSE	NECCO TOOLS,CHENNAI	NT/CH/18/06 1
50	961414114058	JOEL ROY	SVR Industries,Cuddalore	SVR/PD/18/2 4
51	961414114059	JOEL T KARUKAYIL	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-094
52	961414114062	JOJI K GEORGE	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-095

53	961414114063	JOMIN P JOSEPH	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 0
54	961414114064	JOSE AUGUSTINE	SVR Industries,Cuddalore	SVR/PD/18/2 5
55	961414114065	JOSHAN REJI	SVR Industries,Cuddalore	SVR/PD/18/2 6
56	961414114066	JOSHUA K JOHN	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-096
57	961414114068	KEVIN IGNATIOUS	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 1
58	961414114069	LEO BRIGHT L	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 2
59	961414114072	LIJO MATHEW	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-097
60	961414114073	MANISH M	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-098
61	961414114074	MANO M	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 3
62	961414114075	MARIA VALENTEEN ROSHAN M	ESSEL , POLAND	07/05/18
63	961414114076	MARTIN P	ESSEL , POLAND	07/05/18
64	961414114077	MITHIN RAJAN	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-099
65	961414114078	NANTHEESH KUMAR S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/081
66	961414114079	NIDHIN J DAVID	SVR Industries,Cuddalore	SVR/PD/18/2 7
67	961414114080	NIRMAL T RAJAN	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 4
68	961414114081	NISHANTH N T	NECCO TOOLS,CHENNAI	NT/CH/18/06 2

69	961414114085	PAUL STEPHEN	ESSEL , POLAND	07/05/18
70	961414114086	PRATHEEBHAN R	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 5
71	961414114087	PRAVIN BABU T	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 6
72	961414114088	RABIN RAJ R	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 7
73	961414114089	REJO R S	NECCO TOOLS,CHENNAI	NT/CH/18/06 3
74	961414114091	RIGIN SAJI VARGHESE	SVR Industries,Cuddalore	SVR/PD/18/2 8
75	961414114092	RIJO RAJU	SVR Industries,Cuddalore	SVR/PD/18/2 9
76	961414114094	ROBIN ROY	Chara Technologies, CHENNAI	CT/GD/128
77	961414114095	ROBIN V L	Chara Technologies, CHENNAI	CT/GD/129
78	961414114097	ROHAN SKARIA	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-100
79	961414114098	ROSHAN P THOMAS	ESSEL , POLAND	07/05/18
80	961414114103	SAJU I	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/082
81	961414114104	SALIN C	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-101
82	961414114105	SHARON BIJU JOHN	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-102
83	961414114106	SMITH JISHO P	ESSEL , POLAND	07/05/18
84	961414114108	SONNET MATHEW WILSON	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 8
85	961414114109	STEPHIN KURIAN	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-103

86	961414114110	SUBASH S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/083
87	961414114112	SUJIN S	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/084
88	961414114113	SUJU V	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/085
89	961414114114	TEJI KOSHY	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-104
90	961414114116	TINU MATHEW	VETA INDUSTRIES (INDIA) PVT LTD,Kanchipuram	VT/10/18-105
91	961414114117	VIMAL M ALEX	Chara Technologies, CHENNAI	CT/GD/130
92	961414114118	VINCE W	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/086
93	961414114120	XAVIER VINOJ L	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/087
94	961414114301	AJINESH T J	Chara Technologies, CHENNAI	CT/GD/131
95	961414114302	ARAVIND R	Chara Technologies, CHENNAI	CT/GD/132
96	961414114303	ARBIN JOSE A	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/088
97	961414114305	JEBARIN JOSH Y J	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/089
98	961414114307	JERIN J	Chara Technologies, CHENNAI	CT/GD/133
99	961414114310	JOHN KERSHOME J	WONJIN AUTOPARTS INDIA PRIVATE LIMITED,CHENNAI	WJN-T10/090
100	961414114312	SADHAM MYTHEEN M K	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/19 9
101	961414114314	SHAMBU A	UNITECH PLASTO COMPONENTS PVT LTD,Sriperumbudur	UPC/2018/20 0

102	961414114504	JEBIN JOSEPH	Chara Technologies, CHENNAI	CT/GD/134
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4.6. Professional Activities (20)

4.6.1. Professional societies / chapters and organizing engineering events(5)

Students and faculty are active members of various professional societies like SAE, MATES, IET. Various programs are organized on behalf of these professional societies. This extracts the leadership potential from the student.

Sl. No.	Name of Professional Society	Year of Starting
1	Society of Automotive Engineers INDIA (SAEINDIA)	2014
2	Institution of Engineering and Technology (IET)	2015
3	Mechanical Association for Technological Empowerment Society (MATES)	2010

Institution of Engineering and Technology (IET)

The IET Student chapter at Mar Ephraem College of Engineering and Technology imparts knowledge to the students by conducting workshops, talk by high delegates etc.

CAY (2020-21)

Name	Position
Mr. Manoj	IET Coordinator
ABIDAN J LAL	Student Coordinator

CAYm1 (2019-20)

Name	Position
Mr. Manoj	IET Coordinator
Antony JoJo	Student Coordinator

CAYm2 (2018-19)

Name	Position
Mr. Manoj	IET Coordinator
Nevin Abraham Philip	Student Coordinator

Society of Automotive Engineers INDIA (SAEINDIA)

The SAEINDIA Student chapter at Mar Ephraem College of Engineering and Technology imparts knowledge to the students by conducting workshops, Seminars, Industrial Trainings, etc.

CAY (2020-21)

Name	Position
Dr.John IruthayaRaj	Student Chapter staff Coordinator
SAJAN R	Student Coordinator

CAYm1 (2019-20)

Name	Position
Dr.John Iruthaya Raj	Student Chapter staff Coordinator
Akilan	Student Coordinator

CAYm2 (2018-19)

Name	Position
Dr.John Iruthaya Raj	Student Chapter staff Coordinator
Febin Roy	Student Coordinator

Mechanical Association for Technological Empowerment Society (MATES)

The MATES Student chapter at Mar Ephraem College of Engineering and Technology fosters technological innovations and excellence for the benefits of the students

CAY (2020-21)

Name	Position
Mr.Akhil W V	Student Chapter staff Coordinator
PAUL RICHARD DP	Student Coordinator

CAYm1 (2019-20)

Name	Position
Mr.Franklin	Student Chapter staff Coordinator
BERGER R M	Student Coordinator

CAYm2 (2018-19)

Name	Position
Mr.Franklin	Student Chapter staff Coordinator
PRAVIN BABU T	Student Coordinator

Events conducted by professional societies and chapters**2019-2020**

S.No	Professional Body	Name of the event	Resource person (Name with designation)	Date of the event	Funded by
1.	IET	IET KKLN Tech fest	Dr.M.Marsaline Beno	28.09.2019	Management& IET KKLN
2.	IET	IET KKLN Regional level Nice Competition	Dr.Vaishali Gajwad Er.Abishek More	11.11.2019& 12.11.2019	Management& IET KKLN
3.	IET	Two days FTDP on IOT and	Mr. J.M.Aravind	11.11.2019& 12.11.2019	Management& IET KKLN

		vision Robotics			
4.	IET	PATW on Campus heat	Mr.M.manoj	22.02.2020	Management& IET KKLN
5.	MATES	AGNEYA'20	Er.Jaison Johnson	10-03-2020	Management& IET KKLN

2018-2019

S.No	Professional Body	Name of the event	Resource person (Name with designation)	Date of the event	Funded by
1.	IET	Seminar	Prof.Leo Bright singh	17.09.2018	Management
2.	IET	Technovation'18	Prof.Lalin	26.09.2018	Management
3.	MATES	AGNEYA'18	Dr.Anand	30-10-2018	Management
4.	IET	PATW On Campus heat	Prof.Lalu Gladson Robin	28.02.2019	Management
5.	SAE	SAEISS Tirunelveli Division Lecture Meeting	Mr. Harihara Sudan M, Mahindra and Mahindra Ltd	08.03. 2019	Management
6.	IET	ASPIRE'19	Dr.Marsalin Bino	21.03.2019	Management& IET KKLN

2017-2018

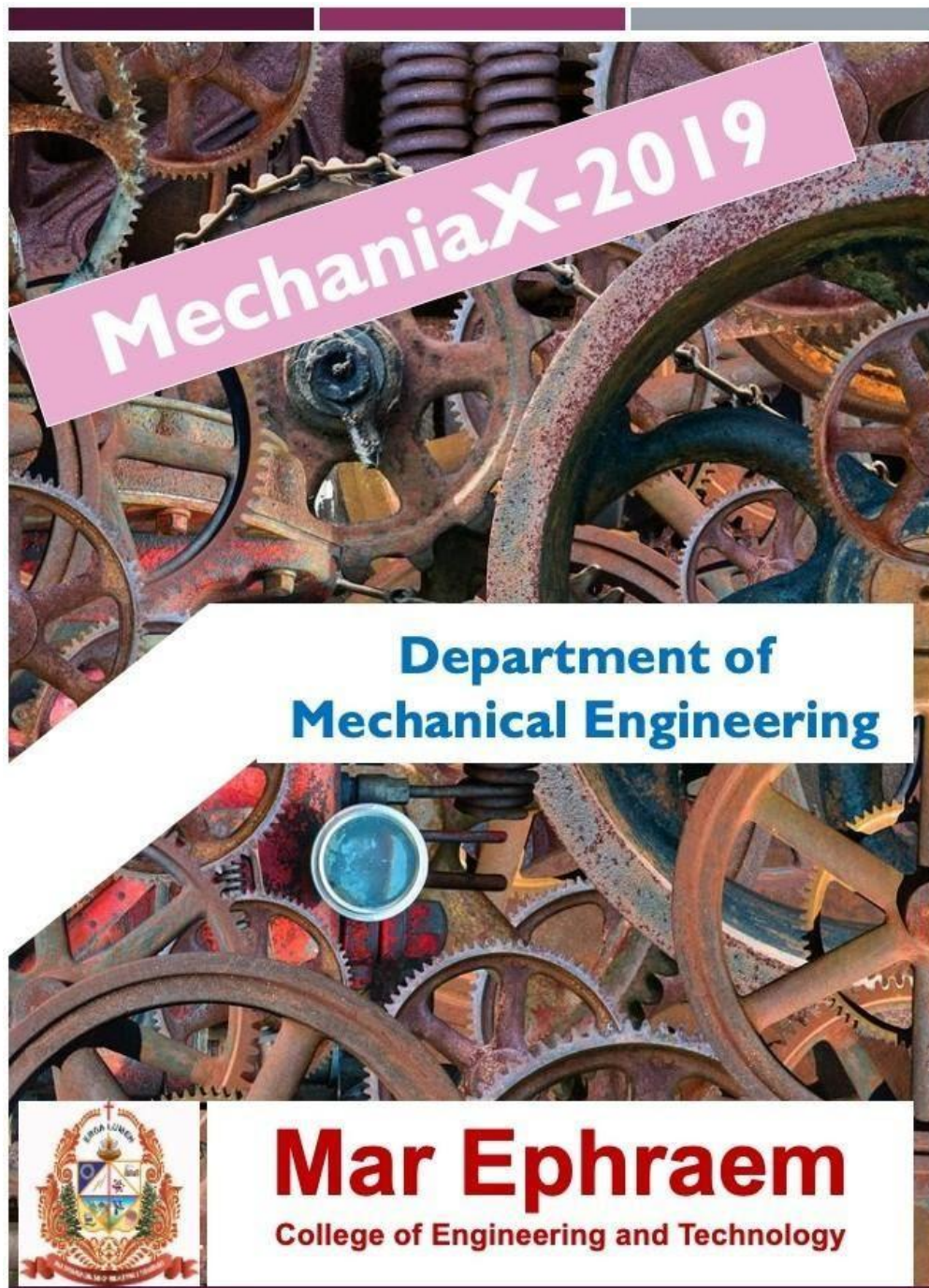
S.No	Professional Body	Name of the Event	Resource person (Name with designation)	Date of the event	Funded by
1.	SAE	Inauguration of Mar Ephraem Drone Club	Mr.Thosmas Varghese, Eventoz, Cochin	26.09.2017	Management

2.	MATES	Agneya'17	Dr.R.Rajesh	28-09-2017	Management
3.	IET	PATW On Campus heat	Prof.Lalu Gladson Robin	16.02.2018	Management
4.	SAE	Automobile Practical Training Program	(i) G.G Maruti Guides. (ii) Athen Bajaj	24.03.2018	Management
5.	IET	Aspire18	Dr.Marsilin Beno	17.03.2018	Management

4.6.2. Publication of technical magazines, newsletters, etc (5)

The purpose of the publication is to encourage the students to get involved in department activities and to evolve their talents in finding out innovative solutions. They can also develop their power of thinking and strengthen their imagination. The magazines also teach the students, the value of co-operation and encourage healthy competition. They are a source of self-help and self-confidence for students. The department publishes

- Mechanix : A Technical Magazine
- Mecha-Times : A Technical news letter





Mar Ephraim

College of Engineering and Technology

(A NAAC Accredited Institution)

Department of Mechanical Engineering

June - Dec '23
Mecha-Times
News Letter - June 2023

Visitors -

Department of Mechanical Engineering is honoured by the confidence in interaction and research by corporate global engineering network.

Ministry -

Department of Mechanical Engineering is committed to empower the students to explore in the professional field of Mechanical Engineering, together with Education in India.

Department of Mechanical Engineering, together with industrial exposure to enhance innovation in technical knowledge and in the research through global industrial & global corporation.

Event Principal's Visit

The Institute representatives in the Department of Mechanical Engineering, in bringing out a detailed report about the activities and non-activities students of their department. In the visit of "Visitors from Education" emphasizing the students in the area visit to be achieved in the future. The visit was in order that Mar Ephraim Institute is moving towards the goal. I would say best wishes to the upcoming activities.

Dr. Arvind Kumar

Event Engineering's Visit

Every visit is a new trip and an opportunity to get new projects in the future, to improve the field education. This is fully to make every visit to the first accomplished phase. The activities involve in providing the their education, highly qualified and experienced faculty from all of world class institutions. In this regard, I told the Department of Mechanical Engineering by providing a resolution to decrease the technical performance of the department by students and teachers.

Dr. S. Sathish Kumar

Department's Visit

I have given ideas and goals to increase the level of Department of Mechanical Engineering to establish the first in the world. This visit will help to take the Department, achievements of the Department I would like to compare all the members of the Institute. This visit always require to return the first course. I would say and sincerely hope this visit will provide information can be a promising research.

Dr. S. Arjun

Event Director's Visit

This recently visited in the first visit of the Department of Mechanical Engineering. I am excited very happy and proud to bring the wonderful from the latest development, information and progress in the department. Every visit can be a communication channel among the Department.

Dr. S. Sathish Kumar

As we are much proud to go to the Management, Principal Director Visit and realize the first commitment achievement, Department of Mechanical Engineering to the students of the Institute.

Dr. S. Sathish Kumar

"The first visit is always for the students but for the teachers."

Editorial Content

- 1. Editor's Message
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Summaries

- Post-C/Signa client met, learned at the Business Centre for Student Rights 2019 as to their clients' Higher Secondary School Qualification.
- Post-KLan Kwai Shing High school interview at the Business Centre, at various career guidance programs.
- Post-C/Signa client met, interviewed at C/Signa for Secondary Counseling at Welfare group of Institutions, and followed staff group activities on "Leadership and Responsibility".
- Post-Malaysia team represented the Singapore NCC's regional level event 2019 at the 2019 Summit 1.8.

Substantiated Work

The final year students held an old India Visit for 10 days covering all the major cities in India. A total of 50 students were part of the group and they were accompanied by 10 faculty members.

The final year students held an industrial visit to Singapore for 1 day. A total of 10 students were part of the group and they were accompanied by 10 faculty members. This visited The Prakash Manufacturing Industries Ltd, Singapore for gaining industrial experience and knowledge.

EDUC. Touched groups (2.8 table project) :-

Senior Assistant: Eva Brindley
 Mentors: David De Din
 Assistant: Michelle, Akmalia, Ayesha and Isahak
 Group Operated: School Endorsing Malaysia
 Mentors: Prof J. Abdul Fatah
 Mentors: Yusef Abdul, Prof. Dr. N. S. S. and Prof. Dr. P.

CLASS - SYMPOSIUM MEETING

Since the student history - a meeting is essential for the growth of any group or program. Likewise, a class-symposium meeting is essential for the growth of the group and so to strengthen the student and their education.

These class symposium meetings are always conducted twice the process of Academic Division, Stage 12 Symposium. Various leaders take this class symposium, look at the meetings are always conducted twice, setting the upbringing of the student and staff.

The first class-symposium was about the final year students and their relation about the Education Symposium 2019 "EDUSYS 2019". It was a celebration high showcasing their progress, income and the time schedule of the "EDUSYS 2019". The class meet from March 9 and also finish their discussion as carried out during the symposium.

PTA Meeting

A PTA meeting was conducted at the end of November with the parents of the final year students and their relation about the graduation and the life after the college. However the day after the commencement would be back to the school to handle with the college finally, because the department will fully have to leave these thoughts and feelings on their own, which they will be ready to move on the "Schools of Life" system. The discussion was mostly concentrating upon the upcoming commencement placements and their jobs.

The students who attended this meeting included the parents and the teachers. Several ideas and suggestions were given by the parents for the school to have, addition and the teachers then clarified. The day for the graduation day took momentum at the moment, ending.










[illegible]

Sl.No	Name of magazines/ newsletters	Year of publication	Advisory Committee	Board of editors (students)
1.	Mechaniax	2020	Dr.D.Rajeev Mr.C.Gigin Durai Mr.Beschi Selvan Mr.Dani	Ajasha J A (IV Mech) Arjunan K (IV Mech) NIJIN S T (III Mech) BIMIN T BIJU (III Mech)
2.	Mecha-Times	2020	Dr.D.Rajeev Mr.C.Gigin Durai Mr.I.Jackson Thanga Roy Mr.Akhil Mr.JosephBencier	Ajesh B S(Iv Mech) Jaison J Tharakan(Iv Mech) Ruskin J(Iii Mech) Jibson Joy(Iii Mech)
3.	Mechaniax 2019	2019	Dr.D.Rajeev Mr. GiginDurai Mr.Dani	Martin Mano J S(Iv Mech) Shejin Raj S(Iv Mech) Renju P Roy(Iv Mech) Denny Johnson(Iv Mech)
2.	Mecha-Times	2019	Dr.D.Rajeev Mr.C.Gigin Durai Mr.I.Jackson Thanga Roy Mr.G.Franklin	Anton James (IVMech) Amruthya S Nair (III Mech) Jijo Thankachan (III Mech) Kailash A Nair (IIMech)

			Mr.C. Manu	Ashish M Mathew(II Mech)
3.	Mechaniac 2018	2018	Dr.D.Rajeev Mr.JacksonThanga Roy Mr.GiginDurai	Arun Sebastian(IV Mech) Joel Roy(IV Mech) Aravind T R(IV Mech) Diji D (IV Mech)
4.	Mecha-Times	2018	Dr.D.Rajeev Mr.Leo Bright Singh Mr .JosephBencier	Ashish P Nair(IV Mech) Mano M(IV Mech) Aji R (IV Mech) Breeze S R(IV Mech)
5.	Mechaniac 2017	2017	Dr.D.Rajeev Mr.Manoj Mr.JacksonThanga Roy	Alan M Aneesh(IV Mech) Dipu Sajan(IV Mech) Alvin Saji (IV Mech) Joji Johnson (IV Mech)
6.	Mecha-Times	2017	Dr.D.Rajeev Mr.Vijayakumar Mr .Arun	Bibin Raj T(IV Mech) Lordson D L(IV Mech) Kumar A (IV Mech) Nijin Shaji (IV Mech)

4.6.3. Participation in inter-institute events by students of the program of study (10)

Table 4.6.3.a: Summary of event participation

S.No.	Academic Year	Prizes Awarded		Participation	
		Co-Curricular	Extra-Curricular	Other State	Within State
1	2020-21	2	16	13	21
2	2019-20	10	24	27	94
3	2018-19	5	7	29	63

Extra-curricular activities

**Table 4.6.3 (b): Prizes / awards in Extra-curricular activities
2020-2021**

SL no	Name	Name of Competition	Within state/ outside state	Wining Place	Organized by
1.	KURUVILA PHILIP THOMAS	Basket Ball	Within state	1	Anna University Zonal Tournament
2.	AMRUTHYA S NAIR	Basket Ball	Within state	1	Anna University Zonal Tournament
3.	NITHIN ZACHARIA MATHEW	Basket Ball	Within state	1	Anna University Zonal Tournament
4.	AKHIL G H	Basket Ball	Within state	1	Anna University Zonal Tournament
5.	ALWIN SINSAJ	Basket Ball	Within state	1	Anna University Zonal Tournament
6.	ANTONY P MANUEL	Basket Ball	Within state	1	Anna University Zonal Tournament
7.	JOBIN PONNACHAN	Basket Ball	Within state	1	Anna University Zonal Tournament
8.	JOEIN J	Basket Ball	Within state	1	Anna University Zonal Tournament
9.	ALLEN VINCELIN V	Kho Kho	Within state	1	Anna University Zonal Tournament

10.	NIJO N	Kho Kho	Within state	1	Anna University Zonal Tournament
11.	SHIJO C	Kho Kho	Within state	1	Anna University Zonal Tournament
12.	ANTO XAVIER C	Hockey	Within state	2	Anna University Zonal Tournament
13.	D ABISH	Hockey	Within state	2	Anna University Zonal Tournament
14.	R P RAHUL PRASAD	Hockey	Within state	2	Anna University Zonal Tournament
15.	JENISH J L	Hockey	Within state	2	Anna University Zonal Tournament
16.	VIGNESH J V	Hockey	Within state	2	Anna University Zonal Tournament
17.	ABISHRAJ	Hockey	Within state	2	Anna University Zonal Tournament
18.	JOEIN J	Hockey	Within state	2	Anna University Zonal Tournament
19.	ABISHEK A	Hockey	Within state	2	Anna University Zonal Tournament
20.	KURUVILLA PHILIP THOMAS	Ball Badminton	Within state	3	Anna University Zonal Tournament
21.	JOBIN PONNACHAN	Ball Badminton	Within state	3	Anna University Zonal Tournament
22.	NIKHIL JOHN	Ball Badminton	Within state	3	Anna University Zonal Tournament
23.	NITHIN ZACHARIAH	Ball Badminton	Within state	3	Anna University Zonal Tournament
24.	CHRISTO KUNJUMON	Ball Badminton	Within state	3	Anna University Zonal Tournament

25.	ALLEN VINCELIN V	Kho Kho	Within state	Participation	DISTRICT CHAMPIONSHIP PARTICIPATION
26.	NIJO N	Kho Kho	Within state	Participation	DISTRICT CHAMPIONSHIP PARTICIPATION
27.	SHIJO C	Kho Kho	Within state	Participation	DISTRICT CHAMPIONSHIP PARTICIPATION

Extra-curricular Activities- 2019-2020

SL no	Name	Name of Competition	Within state/ outside state	Wining Place	Organized By
1.	Jobin Ponnachan	Foot ball	Within state	2	Anna University Zonal Tournament
2.	Nithin Zaharia Mathew	Foot ball	Within state	2	Anna University Zonal Tournament
3.	Manu Abraham	Foot ball	Within state	2	Anna University Zonal Tournament
4.	Akhil Prasolin	Foot ball	Within state	2	Anna University Zonal Tournament
5.	Ashlin S A	Kho Kho	Within state	2	Anna University Zonal Tournament
6.	Allen Wincilin	Kho Kho	Within state	2	Anna University Zonal Tournament
7.	Nijo N	Kho Kho	Within state	2	Anna University Zonal Tournament
8.	Brightson	Thriple Jump	Within state	2	Anna University Zonal Level Athlete meet

9.	Belbin J	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
10.	Dominic Thomas	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
11.	Jaison J Tharakan	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
12.	Nejin Infant N C	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
13.	Rinu Thomas	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
14.	Roshan Raju	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
15.	Soju Bijoy	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
16.	Vinoth V	Group Dance	Within state	1	Malankara Catholic College of Arts and Science
17.	Belbin J	Group Dance	outside state	2	All Saints College of Arts and Science
18.	Dominic Thomas	Group Dance	outside state	2	All Saints College of Arts and Science
19.	Jaison J Tharakan	Group Dance	outside state	2	All Saints College of Arts and Science
20.	Nejin Infant N C	Group Dance	outside state	2	All Saints College of Arts and Science

21.	Rinu Thomas	Group Dance	outside state	2	All Saints College of Arts and Science
22.	Roshan Raju	Group Dance	outside state	2	All Saints College of Arts and Science
23.	Soju Bijoy	Group Dance	outside state	2	All Saints College of Arts and Science
24.	Vinoth V	Group Dance	outside state	2	All Saints College of Arts and Science
25.	Akhileshjith U	Volley Ball	Within state	Participation	Anna University Zonal Tournament
26.	Shibin George Antony G	Volley Ball	Within state	Participation	Anna University Zonal Tournament
27.	Steffin P Varghese	Volley Ball	Within state	Participation	Anna University Zonal Tournament
28.	Siva J	Volley Ball	Within state	Participation	Anna University Zonal Tournament
29.	Vignesh P	Cricket	Within state	Participation	Anna University Zonal Tournament
30.	Ajil Mon B	Cricket	Within state	Participation	Anna University Zonal Tournament
31.	Vishal R G	Basket ball	Within state	Participation	Anna University Zonal Tournament
32.	Vishal R G	Basket ball	Within state	Participation	Anna University Zonal Tournament

33.	Belbin J	Group Dance	outside state	Participation	All Saints College of Arts and Science
34.	Dominic Thomas	Group Dance	outside state	Participation	All Saints College of Arts and Science
35.	Jaison J Tharakan	Group Dance	outside state	Participation	All Saints College of Arts and Science
36.	Nejin Infant N C	Group Dance	outside state	Participation	All Saints College of Arts and Science
37.	Rinu Thomas	Group Dance	outside state	Participation	All Saints College of Arts and Science
38.	Roshan Raju	Group Dance	outside state	Participation	All Saints College of Arts and Science
39.	Soju Bijoy	Group Dance	outside state	Participation	All Saints College of Arts and Science
40.	Vinoth V	Group Dance	outside state	Participation	All Saints College of Arts and Science
41.	Nithish Kumar S	Quiz	Within state	Participation	Nanjil Catholic College of Arts& Science
42.	Vignesh P	Quiz	Within state	Participation	Nanjil Catholic College of Arts& Science
43.	Robinbrow C R	Quiz	Within state	Participation	Nanjil Catholic College of Arts& Science
44.	Jibson Joy	Quiz	Within state	Participation	Nanjil Catholic College of Arts& Science

Extra-curricular Activities- 2018-2019

SL no	Name	Year	Name of Competition	Within state/ outside state	Winning Place	Organized By
1.	S.A.Kevin	III	English Elocution	Within state	3	St Alphonsa Academy
2.	S.A.Kevin	III	Group Discussion	Within state	1	Rorary Club Nagercoil
3.	Jerin Sam James	III	Group Song	Within state	2	Rotary club
4.	J Vijo Gilbert	III	Badminton	Within state	3	Sports Developoment Authority of tamilnadu
5.	J Vijo Gilbert	III	Badminton	Within state	1	Sports Developoment Authority of tamilnadu Kanyakumari District unit
6.	Jobin Jose Varghese	II	Spot dance	Within state	2	Nesomony memorial college
7.	Alex Y	IV	BEST OUTGOING STUDENT AWARD	Within state	1	IET KKLN
8.	Sign G	IV	Group Dance	Within state	Participation	PSN of Institute of Technology And Science
9.	T.Vijaya Raj	IV	Group Dance	Within state	Participation	PSN of Institute of Technology And Science
10.	Austin Tubi T.S	IV	Group Dance	Within state	Participation	PSN of Institute of Technology And Science

11.	Hamjith Merlin G	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
12.	S.A.Deepan	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
13.	Arul Babish.A	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
14.	Bibin.G	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
15.	Berlin Dhas.Y	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
16.	Jothish.Y	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
17.	SundaraAjith S	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
18.	S.Sujin John Bosco	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
19.	Gowtham.A.S	IV	Group Dance	Within state	Partici pation	PSN of Institute of Technology And Science
20.	Jobin Jose Varghese	II	Group Dance	outside state	Partici pation	Mar Baselious
21.	Akhil.thomas	II	Group Dance	outside state	Partici pation	Mar Baselious
22.	Jomin p Joseph	II	Group Dance	outside state	Partici pation	Mar Baselious

23.	Calvin A Anil	II	Group Dance	outside state	Participation	Mar Baselious
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4.6.3(c) Co curricular Activities

Programs name and assessment year: 2020-2021					
Sl.No	Event Name	Organized by	Within state/ outside state	Participants	Prize/ Awards received
1.	Paper Presentation	Bethlahem Institute of Engineering	Within state	ABISHEK G L	First prize
2.	Paper Presentation	Bethlahem Institute of Engineering	Within state	GEO JOHN C	First prize
3.	Paper Presentation	Bethlahem Institute of Engineering	Within state	AKHILESHJITH U	Participation
4.	Paper Presentation	Bethlahem Institute of Engineering	Within state	MUHAMAD NIHAL NUH T	Participation

5.	Paper Presentation	Bethlahem Institute of Engineering	Within state	SAJIN V	Participation
6.	Paper Presentation	Bethlahem Institute of Engineering	Within state	SCARIA P EAPEN	Participation
7.	Paper Presentation	Bethlahem Institute of Engineering	Within state	ROBINBROW C R	Participation
8.	Paper Presentation	Bethlahem Institute of Engineering	Within state	VINOTH C	Participation
9.	Paper Presentation	Bethlahem Institute of Engineering	Within state	BRIGHT SON S	Participation
10.	Paper Presentation	Bethlahem Institute of Engineering	Within state	BENNET KURIAN	Participation
11.	Paper Presentation	Bethlahem Institute of Engineering	Within state	JOEIN J	Participation
12.	Paper Presentation	Bethlahem Institute of Engineering	Within state	AJIN S S	Participation
13.	Paper Presentation	Stella Mary'S College of Engineering	Within state	AKHILESHJITH U	Participation
14.	Paper Presentation	Stella Mary'S College of Engineering	Within state	MUHAMAD NIHAL NUH T	Participation
15.	Paper Presentation	Stella Mary'S College of Engineering	Within state	AKASH R S	Participation

16.	Paper Presentation	Stella Mary'S College of Engineering	Within state	AJIN S S	Participation
17.	Paper Presentation	Stella Mary'S College of Engineering	Within state	SCARIA P EAPEN	Participation
18.	Paper Presentation	Stella Mary'S College of Engineering	Within state	AKHILESHJITH U	Participation
19.	Paper Presentation	Mohandas College of Engineering	outside state	AKHILESHJITH U	Participation
20.	Paper Presentation	Mohandas College of Engineering	outside state	MUHAMAD NIHAL NUH T	Participation
21.	Paper Presentation	Mohandas College of Engineering	outside state	JOEIN J	Participation
22.	Paper Presentation	Mohandas College of Engineering	outside state	AJIN S S	Participation
23.	Paper Presentation	Mohandas College of Engineering	outside state	AKASH R S	Participation
24.	Paper Presentation	Mohandas College of Engineering	outside state	ANTON JAMES	Participation
25.	Paper Presentation	Mohandas College of Engineering	outside state	ASHIS KURIAN VARGHESE	Participation
26.	Paper Presentation	Mohandas College of Engineering	outside state	ANAZ J B	Participation
27.	Paper Presentation	MG College of Engineering	outside state	AKHILESHJITH U	Participation

28.	Paper Presentation	MG College of Engineering	outside state	MUHAMAD NIHAL NUH T	Participation
29.	Paper Presentation	MG College of Engineering	outside state	ASWIN RAJ V R	Participation
30.	Paper Presentation	MG College of Engineering	outside state	CHRISTY VARGHESE	Participation
31.	Paper Presentation	MG College of Engineering	outside state	HARSHEL VINEETH	Participation

Assessment year: 2019-2020					
Sl.No	Event Name	Organized by	Within state/ outside state	Participants	Prize/ Awards received
1.	Paper Presentation	PSN College Of Engineering	Within state	HITHESHU JOSE	First prize
2.	Paper Presentation	PSN College Of Engineering	Within state	ALLEN SABU DANIEL	First prize
3.	Paper Presentation	PSN College Of Engineering	Within state	SAJAN R	First prize
4.	Paper Presentation	PSN College Of Engineering	Within state	SCARIA P EAPEN	First prize
5.	Technical Quiz	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	ABINESH E	First prize
6.	Technical Quiz	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	AKILAN H	First prize

7.	Brain Buzzer	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	JEFFIN BINU JOHN	Second Prize
8.	CAD Modeling	Saveetha Engineering College	Within state	BLESSIN S V	Second Prize
9.	CAE Analysis	Chennai Institute of Technology	Within state	JOEL KURUVILLA MATHEW	Second Prize
10.	CAE Analysis	Chennai Institute of Technology	Within state	NAYANRAJ S R	Second Prize
11.	Paper Presentation	Chennai Institute of Technology	Within state	ALPHIN A	Second Prize
12.	Paper Presentation	Chennai Institute of Technology	Within state	ANTO RUFUS G	Second Prize
13.	Paper Presentation	Chennai Institute of Technology	Within state	ARAVINDHU M	Participation
14.	Paper Presentation	Chennai Institute of Technology	Within state	PRABIN Y	Participation
15.	Paper Presentation	Chennai Institute of Technology	Within state	NEJIN INFANT N C	Participation
16.	Paper Presentation	Chennai Institute of Technology	Within state	ELISHA G JOY	Participation

17.	Paper Presentation	Chennai Institute of Technology	Within state	JITHU JOSE	Participation
18.	Paper Presentation	Chennai Institute of Technology	Within state	RINU THOMAS	Participation
19.	Paper Presentation	Chennai Institute of Technology	Within state	SACHIN THOMAS	Participation
20.	Paper Presentation	Chennai Institute of Technology	Within state	SALBIN S VARGHESE	Participation
21.	Paper Presentation	Chennai Institute of Technology	Within state	ANUROSH CHANDRAN	Participation
22.	Paper Presentation	Chennai Institute of Technology	Within state	ASHIN S A SIRIL	Participation
23.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	MARTIN MANO J S	Participation
24.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	ASHIK SAJI JOHN	Participation
25.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	JITHIN M ABEY	Participation
26.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	JOEL KURUVILLA MATHEW	Participation
27.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	SARAN S NAIR	Participation

28.	Paper Presentation	JEPPIAAR INSTITUTE OF TECHNOLOGY	Within state	ARAVIND KURUP A	Participation
29.	Paper Presentation	Jansons Institute of Technology	Within state	PRINSON VARGHESE	Participation
30.	Paper Presentation	Jansons Institute of Technology	Within state	ARAVINDHU M	Participation
31.	Paper Presentation	Jansons Institute of Technology	Within state	ARJUN HARI	Participation
32.	Paper Presentation	Jansons Institute of Technology	Within state	BELBIN V	Participation
33.	Paper Presentation	Jansons Institute of Technology	Within state	HARISH VR	Participation
34.	Paper Presentation	Jansons Institute of Technology	Within state	JITHU K REJI	Participation
35.	Paper Presentation	National College of Engineering	Within state	VIPIN VARUGHESE	Participation
36.	Paper Presentation	National College of Engineering	Within state	BELBIN J	Participation
37.	Paper Presentation	National College of Engineering	Within state	JAISON THARAKAN J	Participation
38.	Paper Presentation	National College of Engineering	Within state	SHARON SEBASTIAN	Participation

39.	Paper Presentation	National College of Engineering	Within state	XAVIER LOUIS POWATH	Participation
40.	Paper Presentation	National College of Engineering	Within state	NISHANTH C	Participation
41.	Paper Presentation	National College of Engineering	Within state	ARAVIND GOPAL M J	Participation
42.	Paper Presentation	National College of Engineering	Within state	ARUN DANIEL	Participation
43.	Paper Presentation	National College of Engineering	Within state	HITHESHU JOSE	Participation
44.	Paper Presentation	National College of Engineering	Within state	JILLS GEEVARUGHES E SIMON	Participation
45.	Paper Presentation	National College of Engineering	Within state	JOBIN GEORGE	Participation
46.	Paper Presentation	National College of Engineering	Within state	ROBIN M JOSEPH	Participation
47.	Paper Presentation	PSN College Of Engineering	Within state	VIPIN WILSON	Participation
48.	Paper Presentation	ACE College Of Engineering	outside state	ANOOP S S	Participation
49.	Paper Presentation	ACE College Of Engineering	outside state	JESBIN JACOB KURIAN	Participation
50.	Paper Presentation	ACE College Of Engineering	outside state	SHIBU T	Participation
51.	Paper Presentation	ACE College Of Engineering	outside state	ADHARSH F	Participation

52.	Paper Presentation	ACE College Of Engineering	outside state	VINEESH S P	Participation
53.	Paper Presentation	ACE College Of Engineering	outside state	JINO MON M	Participation
54.	Paper Presentation	PSN College Of Engineering	Within state	JOBIN T EAPEN	Participation
55.	Paper Presentation	PSN College Of Engineering	Within state	ROSHAN RAJU	Participation
56.	Paper Presentation	PSN College Of Engineering	Within state	SACHIN VARGHESE MATHEW	Participation
57.	Paper Presentation	PSN College Of Engineering	Within state	SHAINU S	Participation
58.	Paper Presentation	PSN College Of Engineering	Within state	SAJIN DAS D	Participation
59.	Paper Presentation	PSN College Of Engineering	Within state	JOBIN JOSE	Participation
60.	Paper Presentation	PSN College Of Engineering	Within state	JINO S N	Participation
61.	Paper Presentation	PSN College Of Engineering	Within state	ARJUNAN K	Participation
62.	Paper Presentation	PSN College Of Engineering	Within state	JERRY JOHNSON	Participation
63.	Paper Presentation	PSN College Of Engineering	Within state	ATHUL SAM	Participation
64.	Paper Presentation	PSN College Of Engineering	Within state	JESTIN JOHN	Participation
65.	Paper Presentation	PSN College Of Engineering	Within state	PAUL RICHARD DP	Participation

66.	Paper Presentation	MG College of Engineering	outside state	PRAKASH P	Participation
67.	Paper Presentation	MG College of Engineering	outside state	SEBIN JOSE	Participation
68.	Paper Presentation	MG College of Engineering	outside state	FELIX JOHN THOMAS	Participation
69.	Paper Presentation	MG College of Engineering	outside state	ARJUNAN K	Participation
70.	Paper Presentation	Loyola Institute of Technology and Science	Within state	JINO MON M	Participation
71.	Paper Presentation	Loyola Institute of Technology and Science	Within state	AJASHA J A	Participation
72.	Paper Presentation	Loyola Institute of Technology and Science	Within state	NIHIL ANAND G M	Participation
73.	Paper Presentation	Loyola Institute of Technology and Science	Within state	GIBIN VARGHESE KURUVILLA	Participation
74.	Paper Presentation	Loyola Institute of Technology and Science	Within state	ALPHIN A	Participation
75.	Paper Presentation	Loyola Institute of Technology and Science	Within state	MIDHUN BIJU	Participation

76.	Paper Presentation	Loyola Institute of Technology and Science	Within state	ROSHAN RAJU	Participation
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Assessment year: 2018-2019

Sl.No	Event Name	Organized by	Within state/ outside state	Participants	Prize/ Awards received
1.	Paper Presentation	Bethlahen Institute of Engineering	Within state	AshaVasudevan	First Prize
2.	Poster Presentation	Loyola Institute of Technology and Science	Within state	Jerin.V.Reji	Second prize
3.	Technical Quiz	Bethlahen Institute of Engineering	Within state	Martin Mano	First Prize
4.	Project Expo	Bethlahen Institute of Engineering	Within state	Jose Vivek Wilfred	First Prize
5.	Project Expo	Bethlahen Institute of Engineering	Within state	Ebin.E.M	First Prize
6.	Paper Presentation	Bethlahem Institute of Engineering	Within state	Febin Roy	Participation
7.	Paper Presentation	James College of Engineering and Technology	Within state	SmirthyMohan. K	Participation
8.	Drawing	James College of Engineering	Within state	Asha.V.R	Participation

		and Technology			
9.	Paper presentation	James College of Engineering and Technology	Within state	RejinRajan	Participation
10.	Paper presentation	James College of Engineering and Technology	Within state	Asha.V.R	Participation
11.	Technical Quiz	Bethlahen Institute of Engineering	Within state	Abin.S.L	Participation
12.	Paper Presentation	Bethlahen Institute of Engineering	Within state	Ajesh.B.S	Participation
13.	Paper presentation	Bethlahen Institute of Engineering	Within state	Alen Chris	Participation
14.	Lathe Master	Bethlahen Institute of Engineering	Within state	Martin Mano	Participation
15.	Technical Quiz	Bethlahen Institute of Engineering	Within state	AshaVasudevan	Participation
16.	Technical Quiz	Bethlahen Institute of Engineering	Within state	Ebin.E.M	participation
17.	Paper Presentation	James College of Engineering and Technology	Within state	Jithin Jose	Participation
18.	CAD modelling	Bethlahen Institute of Engineering	Within state	Jose Vivek Wilfred	Participation

19.	Poster Presentation	Bethlahen Institute of Engineering	Within state	AshaVasudevan	Participation
20.	Technical Quiz	Bethlahen Institute of Engineering	Within state	Abin.S.L	Participation
21.	Technical Quiz	Bethlahen Institute of Engineering	Within state	Jose Vivek Wilfred	Participation
22.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Joseph Sebastian	Participation
23.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	JibinEasow James	Participation
24.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Reuben M Rajan	Participation
25.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Sachin Subash	Participation
26.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Sibin Samuel	Participation
27.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Vipin Wilson	Participation
28.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Bibin Baby	Participation
29.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Ron Roy	Participation
30.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Febin Roy	Participation
31.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Justin James	Participation
32.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	JibinJose.T	Participation
33.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Jithin Jose	Participation

34.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	RinilBabu Thomas	Participation
35.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Bijin George Philip	Participation
36.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Jerrin John	Participation
37.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Prinsonvarghes e	Participation
38.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	JibuChandy	Participation
39.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	BibinBiju	Participation
40.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Jobin Jose	Participation
41.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Jose Tharakan.A.N	Participation
42.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Abin V Babu	Participation
43.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Rejin Raja	Participation
44.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Sibin S Daniel	Participation
45.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Praison George Varghese	Participation
46.	SUPRA SAEINDIA Student Formula	SUPRA SAEINDIA	Outside state	Lijo S Mathew	Participation

Criterion 5
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FACULTY INNOVATION AND CONTRIBUTIONS

Name	PAN No.	University Degree	Date of Receiving Degree	Area of specialisation	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Associate Prof.).	Initial Date of Joining	Association Type	At present working with the institution (Yes/No)
Dr.N.Austin	AEHPA7291 Q	ME/M. Tech and PhD	07/04/14	Refrigeration and air conditioning	5			Professor	16/04/14	16/04/14	Regular	Yes
Dr.D.Rajeev	AELPR7717 J	ME/M. Tech and PhD	15/09/18	Condition Monitoring	7			Professor	01/10/18	29/06/11	Regular	Yes

Prof.Dr.T. Aseer Brabin	ALCPA5398J	ME/M. Tech and PhD	10/10/11	Thermal Engineering				Professor	08/01/18	08/01/18	Regular	Yes
Prof..Dr.P.Murugesan	BMAPM5518M	ME/M. Tech and PhD	20/07/09	Industrial Engineering				Professor	24/04/17	24/04/17	Regular	No
Mr.S.L. Beschi Selvan	BSWPB4966R	M.E/M.Tech	06/06/11	Manufacturing Engineering				Assistant Professor		01/07/11	Regular	Yes
Mr. P. Anto Paulin Merinto	AXFPA7694E	M.E/M.Tech	14/06/10	Manufacturing Engineering	1			Assistant Professor		10/01/12	Regular	Yes
Mr.C.K.Joseph Bencier	APOPJ4577Q	M.E/M.Tech	14/06/10	Thermal Engineering				Assistant Professor		09/02/12	Regular	Yes
Mr.D.Jegan Raj	BHIPD1667C	M.E/M.Tech	15/06/09	Manufacturing Engineering				Assistant Professor		14/06/12	Regular	Yes
Mr. M. John Iruthaya Raj	AQJPJ0892N	M.E/M.Tech	06/06/11	Computer Aided Design	2			Assistant Professor		04/07/12	Regular	Yes
Mr. N.E. Godwin Pithalis	BKDPG1702P	M.E/M.Tech	11/06/12	Computer Integrated Manufacturing				Assistant Professor		24/07/12	Regular	Yes
Mr.S.Arun	ALNPA6343E	M.E/M.Tech	11/06/12	Energy Engineering				Assistant Professor		01/08/12	Regular	Yes
Mr.I.Jackson Thanga Roy	ACKPI6464N	M.E/M.Tech	10/06/13	Computer Aided Design				Assistant Professor		03/07/13	Regular	Yes
		M.E/M.Tech			1							Yes

Mr.R.Leo Bright Singh	BIGPS7412H		10/06/13	Computer Aided Design				Assistant Professor		10/07/13	Regular	
Mr.S.Vijayakumar	AJZPV8475C	M.E/M.Tech	11/06/07	Computer Aided Design	6			Assistant Professor		10/07/13	Regular	Yes
Mr.M.Manoj	ATJPM2522K	M.E/M.Tech	07/06/10	Manufacturing Engineering	1			Assistant Professor		10/07/13	Regular	Yes
Mr.G.Franklin	ABTPF1707D	M.E/M.Tech	16/06/14	Energy Engineering	1			Assistant Professor		07/08/14	Regular	Yes
Mr.D.Dani	BKWPD0568F	M.E/M.Tech	08/06/15	Energy Engineering				Assistant Professor		01/07/15	Regular	Yes
Mr.C.Gigin Durai	BESPG9730A	M.E/M.Tech	08/06/15	Manufacturing Engineering				Assistant Professor		02/07/15	Regular	Yes
Mr.P.Reghu	AUGPR8856F	M.E/M.Tech	08/06/2009	Manufacturing Engineering				Assistant Professor		04/02/16	Regular	Yes
Mr.A.Jude Felix	AFRPF4442B	M.E/M.Tech	06/06/16	Manufacturing Engineering				Assistant Professor		02/07/16	Regular	Yes
Mr. Akhil W V	AEYPW1645M	M.E/M.Tech	12/06/17	Manufacturing Engineering				Assistant Professor		05/07/17	Regular	Yes
Mr.C.Manu	DBPPM6070K	M.E/M.Tech	08/06/15	Manufacturing Engineering				Assistant Professor		04/07/17	Regular	Yes
		M.E/M.Tech			1							No

Mr.Lalu G Robin	AGQPR2420 R		07/06/04	Manufacturing Engineering				Assistant Professor		04/07/12	Regular	
Mr.D.Kumar	CKGJJ7996 D x	M.E/M.Tech	07/06/04	Manufacturing Engineering				Assistant Professor		02/04/16	Regular	No
Mr.T.Sujin	JHJFJ6879F	M.E/M.Tech	09/06/14	Engineering Design				Assistant Professor		03/04/17	Regular	No
Mr.Senthil Kumar	DBGHG645 5D	M.E/M.Tech	10/06/14	Manufacturing Engineering				Assistant Professor		03/04/17	Regular	No
Mr.J.Suresh Kumar	CZLPK2925 G	M.E/M.Tech	13/06/11	CAD/CAM				Assistant Professor		02/02/17	Regular	No
Mr.John Pradeep J	BFYPJ0678F	M.E/M.Tech	16/06/14	Manufacturing Engineering				Assistant Professor		02/02/17	Regular	No
Mr.Akhil Sam P	AGGAB654 4D	ME/M. Techand PhD	06/06/16	Manufacturing Engineering				Assistant Professor		29/07/16	Regular	No

5.1 Student-Faculty Ratio (20) Total Marks 16.00 Institute Marks
UG

No. of UG Programs in the Department: 1

B.E Mechanical Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2020-21)		(2019-20)		(2018-19)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	120	14	120	9	120	11
3rd Year	120	11	120	11	120	11
4th Year	120	11	120	11	120	14
Sub-Total	360	36	360	31	360	36
Total	396		391		396	
Grand Total	396		391		396	

PG

No. of PG Programs in the Department : 1

M.E Manufacturing Engineering			
Year of Study	CAY(2020-21)	CAYm1(2019-20)	CAYm2(2018-19)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	18	18	18
2nd Year	18	18	18
Total	36	36	36
Grand Total	36	36	36

SFR**No. of UG Programs in the Department: 1****No. of PG Programs in the Department: 1**

Description	CAY(2020-21)	CAYm1(2019-20)	CAYm2 (2018-19)
Total No. of Students in the Department(S)	432 Sum total of all (UG+PG) students	427 Sum total of all (UG+PG) students	432 Sum total of all (UG+PG) students
No. of Faculty in the Department(F)	21 F1	22 F1	23 F2
Student Faculty Ratio(SFR)	20.57 SFR1=S1/F1	19.41 SFR2=S2/F2	18.78 SFR3=S3/F3
Average SFR	19.58 SFR=(SFR1+SFR2+SFR3+SFR4)3		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2020-21)	21	0
CAYm1(2019-20)	22	0
CAYm2(2018-19)	23	0

Average SFR for three assessment years: 19.03

5.2 Faculty Cadre proportion (25)

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2020-21)	2.00	3.00	4.00	0.00	14.00	18.00
CAYm1(2019-20)	2.00	4.00	4.00	0.00	14.00	18.00
CAYm2(2018-19)	2.00	3.00	4.00	0.00	14.00	20.00
Average Numbers	2.00	3.00	4.00	0.00	14.00	20.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 25.00

5.3 Faculty Qualification (25)

	X	Y	F	$FQ = 2.5 \times [(10X + 4Y) / F]$
2020-21(CAY)	3	18	21.00	12.14
2019-20(CAYm1)	4	18	21.00	13.33
2018-19(CAYm2)	3	20	21.00	13.10

Average Assessment: 13.00

5.4 Faculty Retention (25)

Description	2018-19	2019-20	2020-21
No of Faculty Retained	22	21	21
Total No of Faculty	25	25	21
% of Faculty Retained	88	84	100

Average : 90.00

Assessment Marks : 20.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

For better understanding of concepts, Innovative methods of Teaching and Learning are adopted by the faculty. The content and method are available in the public domain through Institutional Website.

Flipped classroom

Faculty promotes flipped learning approach so that students get necessary knowledge before class.

Virtual classroom

Faculty provide the online learning environment that allows interaction between the faculty and the students as they are participating in learning activities

Simulation/Demonstration

Faculty demonstrate the principles and provide experiential learning through simulations/models.

Table 5.5: Innovative Methods

Sl. No.	Name of Faculty	Name of the Course	Innovative method adopted	Topic
1.	Mr.N.E. Godwin Pithalis	Non Destructive Testing	Flipped Class Room	Destructive & Non Destructive Testing
2.	Mr.N.E. Godwin Pithalis	Non Destructive Testing	Flipped Class Room	LPT & MPT
3.	Mr.N.E. Godwin Pithalis	Maintenance Engineering	Flipped Class Room	Principles and Practice of Maintenance Engineering
4.	Mr.C.Gigin Durai	Engineering Mechanics	Virtual Class Room	Centroid/Centre of Gravity
5.	Mr.C.Gigin Durai	Engineering Mechanics	Virtual Class Room	Moment of Inertia
6.	Mr.C.Gigin Durai	Engineering Mechanics	Virtual Class Room	Moment & Couple
7	Mr.M.John IruthayaRaj	Computed Aided Design	Flipped Class Room	Product Design & Development
8	Mr.R.Leo Bright Singh	Lean Manufacturing	Flipped Class Room	Lean & Six Sigma
9	Mr.C.Manu	Computed Aided Design	Flipped Class Room	Additive Manufacturing
10	Mr.Joseph bencier	Thermal Engineering	Flipped Class Room	Vapor Compression & Absorption system
11	Mr.Manoj	Kinematics of Machinery	Software Demonstration	Quick Return Mechanism

A Faculty scores maximum five points for participation
 Participation in 2 to 5 days Faculty development program: 3 Points
 Participation>5 days Faculty development program: 5 points

Sl. No.	Name of the Faculty	Max. 5 per Faculty		
		CAY (2020-2021)	CAY (2019-2020)	CAYm1 (2018-2019)
1.	Prof. Dr. Austin N	5	3	3
2.	Prof.Dr. D. Rajeev	5	5	3
3.	Prof.Dr.Murugesan	5	3	3
4.	Prof.Dr.AseerBrabin T	5	0	3
5.	Mr. BeschiSelvan	5	0	3
6.	Mr. P. AntoPaulinMerinto	5	3	3
7.	Mr. Joseph Bencier C.K	5	3	3
8.	Mr. Jegan Raj D	3	5	3
9.	Mr. M. John Iruthaya Raj	5	5	3
10.	Mr. N.E. Godwin Pithalis	5	3	3
11.	Mr. Arun S	3	0	3
12.	Mr. Jackson Thanga Roy I	5	3	3
13.	Mr. Leo Bright Singh R	5	5	3
14.	Mr. Vijayakumar S	5	3	3
15.	Mr. Manoj M	3	3	3
16.	Mr. Franklin G	0	5	3
17.	Mr. Dani	3	3	3
18.	Mr. GiginDurai C	5	5	3
19.	Mr. Reghu P	0	5	3
20.	Mr. Jude Felix	5	3	3
21.	Mr. Akhil W V	3	5	0

22.	Mr. Manu	0	5	3
23.	Mr. Lalu G Robin	0	3	3
Sum		85	77	66
RF= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1		15	21	21.35
Assessment = $3 \times (\text{Sum}/0.5\text{RF})$ (Marks limited to 15)		34	22.00	18.55

Table B.5.6. Calculation of Faculty as participants in Faculty Development/Training Activities/STTPs

5.7 Research and Development (30)

5.7.1 Academic Research (10)

Table 5.7.1(a): Details of Journal Publications

Sl.No	Name of the Faculty	No. of publications
1.	Prof.Dr.Austin N	5
2.	Prof.Dr.D.Rajeev	7
3.	Mr.M.John Iruthaya Raj	2
4.	Mr.Leo Bright Singh R	2
5.	Mr.Vijaya kumar S	6
6.	Mr.P.Anto Paulin Merinto	1
7.	Mr.Franklin G	1
8.	Mr.Manoj M	1
9.	Mr.Lalu G Robin	1
10	Dr. N E Godwin Pithalis	1

Quality Publications

Table 5.7.1(b): Details of Quality Publications

Sl. No.	Name of the Faculty	Title of the Article	Journal in which Published	Year of Publication	UGC Recognized Journal & Scopus/SCI journals
1.	Dr.N.Austin	Optimization of Shrinkage porosity in $AlSi_5Cu_1Mg$ alloy using response surface Methodology	Material Today	2020	Scopus
2.	Dr.D.Rajeev	Minimizing MRR during Turning of AISI 4140 steel with the Selected process Parameters by Optimization	Journal of Mechanics of Continua and Mathematical Sciences	2020	SCI
3.	Mr.VijayaKumarS	Bio Caryota Chopped Fibre Reinforced Polyester Composites: A Study on Fracture Toughness Model	Test Engineering Management	2020	Scopus
4.	Mr.VijayaKumarS	Bio Caryota Chopped Fibre Reinforced Polyester Composites: Evaluation Vibration Analysis	Test Engineering Management	2020	Scopus
5.	Mr.VijayaKumarS	Bio Caryota Fiber Reinforced Polymer Composites: Mechanical Properties and Vibration Behaviour Analysis	Journal of Bionic Engineering & Springer	2019	SCI
6.	Mr.VijayaKumarS	Evaluation on mechanical properties of randomly oriented Caryota fiber reinforced polymer composites	Journal of Materials Research and Technology & Elsevier	2019	SCI
7.	Mr.JohnIruthaya Raj.M	Central Composite Experimental Design Applied to the Dry Sliding Wear Behavior of Mg/Mica Composites	Journal of Tribology & ASME	2019	SCI
8.	Mr.JohnIruthaya Raj.M	Mechanical and wear properties of Mg/Mo nanocomposites	Kovove Materialy- Metallic Materials	2019	SCI

9.	Dr.D.Rajeev	Artificial neural Network ANN based Tool wear estimation on dry hard turning process of AISI4140 steel using coated carbide tool	Bulletin polish Academy	2017	SCI
10.	Mr.LaluGladson Robin	Wire mesh/ Ceramic Particle reinforced Aluminium based Composite using Explosive Cladding	Material Science Forum	2017	
11.	Dr.D.Rajeev	Statistical Analysis of Surface Roughness in Hard Turning: An Optimisation Approach	Applied Mathematics and Information Sciences	2017	Scopus
12.	Dr.AustinN	Experimental Study of Environment Friendly Mixed Refrigerant to replace R-134a in a VCR system with testing and training of ANN	Journal of Advances in Chemistry	2016	UGC
13.	Dr.D.Rajeev	Prediction of Tool wear in Hard Turning of AISI4140 steel through Artificial neural network and Regression Models	Middle East journal of Scientific Research	2016	SCI
14.	Dr.D.Rajeev	Experimental study of surface roughness in hard turning of AISI4140 steel with coated carbide tool	World Applied Science	2016	UGC
15.	Dr.D.Rajeev	Prediction of Roughness in Hard turning of AISI4140 steel through Artificial neural networks and Regression Models	Journal of Mechanical Engineering and Technology	2016	Scopus
16.	Mr.LeoBrightSingh R	Optimization of Shrinkage porosity in $AlSi_5Cu_1Mg$ alloy using response surface Methodology	Material Today	2020	Scopus
17.	Mr.LeoBrightSingh R	Synthesization and investigation on mechanical characteristics of aluminium alloy 7075 with TiB_2 composite	Journal of ceramic processing research	2021	Scopus

18	Dr. N E Godwin Pithalis	Tensile and Flexural Behaviour of Basalt Composites with Silicon Carbide Fillers	Silicon	2020	Scopus
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Faculty presented in conferences

Table5.7.1(c): Details of Faculty presented in Conferences

Sl. No.	Name of faculty	Title of the Paper	Name of the organizing institution	Date/ Duration of the programme	International/ National State/ Local
1.	Dr.S.Vijayakumar	Mechanical Property Evaluation of Hybrid Reinforced Epoxy Composite	Sai Ram Institute of Technology, Chennai	30&31, March,2017	International
2.	Mr.R.Leo BrightSingh	Poster Presentation at conference	Rajiv Gandhi Centre for Bio-Technology, Trivandrum	4&5,February, 2016	International
3.	Mr.I.JacksonThangaRoy	Mechanical Characterization Of JISG4051 Heat Treated Steel	Mahendra College Of Engineering	25MAY2017	International
4.	Dr. John IrutayaRaj.M	Mechanical Behaviour Of Aluminium Alloy6061Reinforced With Molybdenum Particulates	Panimalar Institute Of Technology	15 May 2017	International
5.	Dr. GODWINPITHALIS.N.E	Mechanical Characterization Of Carbon Fiber Reinforced Aluminium 6061 Matrix Composite By Squeeze InfiltrationTechnique	Panimalar Institute Of Technology	15 May 2017	International
6.	Dr.S. Vijayakumar	Mechanical Property Investication And Analysis Of Fish Tail Palm Fiber Reinforced	Ramakrishna Institute of Technology	22 March 2019	National

		Polymer Composites			
7.	Mr.BeschiSelvan.S.L	Mechanical Characterisation Of Glass Fibre With Aluminium And Sugarcane Fibre	PSN College of Engineering and Technology	18 March 2019	International
8.	Mr.S.ARUN	Experimental Investigation Of Banana Fiber Reinforced Composite Material With Epoxy Resin	PSN College of Engineering and Technology	18 March 2019	International
9.	Mr. P.Anto paulin merinto	Analysis Of Friction StirWelded Aluminium Plates ReinforcedByZinc Powder	St.Josephs Institute Of Technology	4 May 2018 & 5 May 2018	International
10.	Dr.D.Rajeev	Identification of problemis Investigation of NanoTitanium DioxideReinforced with 2024Aluminium Alloy MetalMatrix Composites.	RVS TechnicalCampus	23 March 2017 & 24 March 2017	International
11.	Dr.N.Austin	Process CharcterisationOf Composite Material Using CoconutFibers	RVS TechnicalCampus	23 March 2017 & 24 March 2017	
12.	Dr.AseerBrabinT	Finite element analysis of Cylindrical Pressure vessels having a misalignment in a circumferential Joint,International Journal of Pressure vessels and Piping,	Ramakrishna Institute ofTechnology	22 March 2019	National

13.	Dr.P.Murugesan	Experimental Investigation Silicon Carbide Reinforced Aluminum 6061 Metal Matrix Composite by Stir Casting Method	SSM Institute of Engineering and Technology	12 March 2019	International
14.	Mr.Reghu	Effect of Chemical Treatment on Natural Fiber Reinforced Polymer Composites	PSN College of Engineering and Technology	18 March 2019	International
15	Mr.Leo Bright Singh R	Synthesization and Characterization of Metal Matrix Composites	St. Josephs Institute Of Technology	4 January 2020	International
16	Dr. GODWIN PITHALIS.N.E	Synthesization and Characterization of Polymer Composites	PSN College of Engineering and Technology	25 January 2020	International
17	Dr. John Iruthaya Raj M,	“Influence Of Matrix Modifications By Nano Clay On The Mechanical Characteristics Of Sandwich Panels”	Francis Xavier engineering college	31st March 2021.	International

B. Ph.D details during the Assessment period

Table 5.7.1.(d): Faculty members who received Ph.D. during the assessment period

Sl. No.	Name of the Faculty	Date	Thesis Title	University
1.	Dr.D.Rajeev	06-09-2018	Condition Monitoring of tool Wear and Surface Roughness Using Coated Carbide tool in Hard Turning	Hindustan Institute of Technology & Science
2.	Mr.M.John Iruthaya Raj	12-10-2020	Synthesis, characterization, and wear behavior studies of mg/mo, mg/mica composites fabricated by	Anna University, Chennai

			powder metallurgy processing method	
3	Mr.S. Vijayakumar	21-09-2021	Mechanical property evaluation of nova Caryota Fiber Reinforced Polymer Composites	SathyabamaUniversity
4	Mr.N.EGodwin Pithalis	12-11-2021	Synthesis and characteristics of basalt fiber polymer composites reinforced with silicin carbide filler	Anna University, Chennai

Faculty pursuing Ph.D

Table5.7.1 (e): Details of Faculty who are pursuing Ph.D.

Sl. No.	Name of the Faculty	Ph.D. pursuing University	Year of Registration	Details of Guide	Area of Research Work
1	Mr.R.Leo Bright Singh	Anna University	July 2015	Dr.Jinu,MechanicalEngineering,University college of Engineering,Nagercoil	Metal Matrix
2	Mr. Beschi Selvan.S.L	Anna University	Jan 2018	Dr.BensamRaj.J, MechanicalEngineering,NadarSaraswathycollegeof Engineering,Theni	Polymer Matrix
3	Mr.Anto Paulin Merinto	Anna University	Nov 2020	Dr.AjithKingsly,Mechanical, St.Xavier's Catholic College ofEngineering	Composit e Materials

Book Published /Reviewed

Table5.7.1 (f):Details of Book Published/Reviewed

Sl. No	Name of the Faculty	Name of the Book	Publisher
1	Dr.N.Austin	Design of Transmission Systems	SIA Publications
2	Dr.D.Rajeev	Finite Element Analysis	SIA Publications
3	Dr.N.Austin	Unconventional Machining Process	Charulatha publications
4	Dr.N.Austin	Testing of Materials	Charulatha publications
5	Mr.N.E Godwin Pithalis	Unconventional Machining Process	Charulatha publications
6	Mr.N.E Godwin Pithalis	Testing of Materials	Charulatha publications

7	Mr.ManuChandran	Unconventional Machining Process	Charulatha publications
8	Mr.ManuChandran	Testing of Materials	Charulatha publications

5.7.2 Sponsored Research (5)

2019-2020 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Technology Intervention for Preservation of Tribal Food Processing Technologies & Heritage	1 year	DST-TDT-SHRI	1,79,83,063
Kicker operated Coconut De-husking Machine	6 Months	DST-New GEN IEDC	2,50,000
Semi-Automatic Tea Blending Machine	6 Months	DST-New GEN IEDC	2,50,000
			Total Amount(X): 1,84,83,063

2018-2019 (CAYm2)

Project Title	Duration	Funding Agency	Amount
A proof of concept: Design and Development of a portable Image processing-based system for the identification of E coli Bacteria in drinking water	2 years	DST	990717.00
			Total Amount(X): 990717.00

2017-2018 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Development of Automated Rubber Tapping Machine to improve the social-economic status of Rubber Growers in Rural Areas	3 years	DST	3769651.00
			Total Amount(X): 3769651.00

5.7.3 Development Activities (10)

A. Product development

Table 5.7.3 (a): Product Developed by the Students

Sl. No.	Name of the Faculty	Name of Student	Year	Product	Outcome
1	Dr.D Rajeev	Abish Raj A Deuker Dikkinson J S Prino M Simiyon	2021	Semi Automated Coconut Dehusking Machine	Fabricated Semi Automated Coconut Dehusking Machine
2	Mr.Dani	Jenish K Praveen S Ruskin J Sajin V	2021	Fruit Plucker	Fabricated Fruit Plucker
3	Dr.M.JohnIruthayaRaj	H.AkhilanS.Ansly G.AntoRufus M.Jino Mon	2019	Coin operated RubberSheeting Machine	Fabricated Coin operatedRubber Sheeting Machine forRubber Growers.
4	Mr.A.JudeFelix	Jinesh John Prabagar Robin	2019	MiniPortablePyrolysisSetup	Fabricated Pyrolysis setup fordisposal of plastics andproducing bio-oil
5	Mr.A.JudeFelix	Prabin G VibinJoseV Prakash P Shijo Paul C M	2019	Kicker Operated CoconutDe-Husking Machine	Fabricated Kicker OperatedCoconut De-Husking Machinefor Coconut Growers.

7	Mr.R.LeoBrightSingh	Anoop SS Nandhu Padma kumar Sam Zachira Smirthy Mohan	2018	Convertible Wheel Chair	Fabricated Convertible WheelChair for the PhysicallyChallenged.
8	Mr.LaluGRobin	Levin Vineeth Mathew Nithin E Saji Roshan P Thomas Sharon Biju John	2018	Staircase ClimbingTrolley	Fabricated Staircase Climbing Trolley for StairCase
9	Mr.I.Jackson ThangaRoy	Smith Jisho P MariaValenteenRoshanPThom as	2017	Automated RubberTappingMachin e	Fabricated Automatic RubberTapper

B. Research Laboratories

Sl. No.	Facility	Specification	Purpose
1.	Stir Casting Machine	Temperature 12000c Al & Mg Alloy	Casting of Aluminum &Magnesium materials
2.	Video Measuring Machine	SVI-CMM-222, Measuring Range :200*200*200Accuracy: 3+L/200um	Measures the geometry of physical objects by sensingdiscrete points
3.	3D Printer	Ultimaker 3 Layer thickness: 20 – 200 Microns. XYZ accuracy: 12.5 x 12.5 x 2.5 microns. Print bed details: Heated & Removable Borosilicate glass.	For Manufacturing Prototypes

4.	MuffleFurnace	MaxTemperature=16000c	Heating of Materials
5.	Pin-Disc Tribometer	LoadRange:Upto60N RotationalSpeed:200to2000rpm Frictional Force Measurement : 0 to 200 N CompoundWearMeasurement:0to1200μm	Measure the Wear Tribology.

C. Instructional Materials

Course Notes

Every faculty members prepare course wise lecture schedules, resource material and other related instruction material before the commencement of each semester.

PPT Slides

Content wise instruction material including PPT presentations is developed, for all the courses prior to the commencement of each semester.

Tutorial

Tutorials are provided for the students, to solve as many application level problems, so that the students can achieve our specific outcomes.

Laboratory manuals

Laboratory manuals are prepared by the faculty members and are maintained in each lab.

Table 5.7.3 (c): NPTEL Courses Referred

Sl.	NPTEL Course Name	HyperLink	NPTEL Course Conducted by	Related Courses	Referred by
1	Advanced Manufacturing Processes	http://nptel.ac.in/courses/112107077/	Dr.A.K.Sharma, Dr.PradeepKumar, IITRoorkee	Manufacturing Technology – I; Manufacturing Technology-II	Prof. Lalu Gladson RobinProf.Anto PaulinMerinto
2	Advanced Engineering Thermodynamics	http://nptel.ac.in/courses/112103016/	Prof.P.Mahanta,IITGuwahati	Engineering Thermodynamics	Prof. Franklin Prof. Joseph Bencier
3	Advanced Gas Dynamics	http://nptel.ac.in/courses/112106056/	Dr.RinkuMukherjee,IIT Madras	Gas Dynamics and Jet Propulsion	Prof.Vijayakumar

4	Advanced Finite Elements Analysis	http://nptel.ac.in/courses/112106130/	Dr.R.Krishnakumar,IIT Madras	Finite Element Analysis	Prof. Jackson Thanga Roy
5	Advanced Manufacturing Processes	http://nptel.ac.in/courses/112107078/	Dr.A.K.Sharma,IIT Roorkee	Manufacturing Technology – I; Manufacturing Technology-II	Prof. Lalu Gladson Robin Prof. Anto Paulin Merinto
6	Advanced Machining Processes	http://nptel.ac.in/courses/112104028/	Prof. Vijay K. Jain, IIT Kanpur	Unconventional Machining Process	Prof. Godwin Pithalis
7	Applied Thermodynamics	http://nptel.ac.in/courses/112106133/	Prof. T. Sundararajan Prof. J.M.Mallikarjuna Prof. U.S. Premananda Shet, IIT Madras	Engineering Thermodynamics	Prof. Franklin Prof. Joseph Bencier
8	Advanced Strength of Materials	http://nptel.ac.in/courses/112101095/	Prof. S.K. Maiti, IIT Bombay	Strength of Materials	Prof. Manoj
9	Basic Thermodynamics	http://nptel.ac.in/courses/112108148/	Prof. K. Srinivasan Prof. Pradip Dutta, IISc Bangalore	Engineering Thermodynamics	Prof. Franklin Prof. Joseph Bencier
10	Basic Thermodynamics	http://nptel.ac.in/courses/112105123/	Prof. S.K. Som, IIT Kharagpur	Engineering Thermodynamics	Prof. Franklin Prof. Joseph Bencier
11	Basic Thermodynamics	http://nptel.ac.in/courses/112104113/	Prof. Y.V.C.Rao Prof. Gautam Biswas, IIT Kanpur	Engineering Thermodynamics	Prof. Franklin Prof. Joseph Bencier
12	Computer-Aided Design and Manufacturing	http://nptel.ac.in/courses/112102101/	Prof. P.V. Madhusudan Rao Prof. Anoop Chawla, IIT Delhi	Computer-Aided Design	Prof. John Iruthyaraj
13	Computer-Aided Engineering Design	http://nptel.ac.in/courses/112104031/	Dr. Anupam Saxena, IIT Kanpur	Computer-Aided Design	Prof. John Iruthyaraj
14	Conduction And Radiation	http://nptel.ac.in/courses/112106155/	Prof. C. Balaji, IIT Madras	Heat and Mass Transfer	Prof. Franklin Prof. Joseph Bencier
15	Convective Heat and Mass Transfer	http://nptel.ac.in/courses/112101002/	Prof. A.W.Date, IIT Bombay	Heat and Mass Transfer	Prof. Franklin Prof. Joseph Bencier

16	Convective Heat and Mass Transfer	http://nptel.ac.in/courses/112104159/	Dr. Amaresh Dalal Prof. Gautam Biswas, IIT Kanpur	Heat and Mass Transfer	Prof. Franklin Prof. Joseph Benchier
17	Convective Heat Transfer	http://nptel.ac.in/courses/112106170/	Prof. Ajit K. Kolar Dr. Arvind Pattamatta, IIT Madras	Heat and Mass Transfer	Prof. Franklin Prof. Joseph Benchier
18	Design of Machine Elements I	http://nptel.ac.in/courses/112105124/	Prof. G. Chakraborty Prof. B. Maiti Prof. S.K. Roychowdhury, IIT Kharagpur	Design of Machine Elements	Prof. Beschi Selvan
19	Design of Machine Elements I	http://nptel.ac.in/courses/112105125/	Prof. G. Chakraborty Prof. B. Maiti Prof. S.K. Roychowdhury, IIT Kharagpur	Design of Machine Elements	Prof. Beschi Selvan
20	Dynamics of Machines	http://nptel.ac.in/courses/112104114/	Prof. Amitabha Ghosh, IIT Kanpur	Dynamics of Machinery	Prof. Godwin Pithalis
21	Dynamics of Machines	http://nptel.ac.in/courses/112101096/	Prof. P. Seshu Prof. K. Kurien Issac Prof. C. Amarnath, IIT Bombay	Dynamics of Machinery	Prof. Godwin Pithalis
22	Engineering Drawing	http://nptel.ac.in/courses/112104172/	Dr. Anupam Saxena, IIT Kanpur	Engineering Graphics	Prof. Dani
23	Engineering Drawing	http://nptel.ac.in/courses/112103019/	Prof. P.S. Robi, IIT Guwahati	Engineering Graphics	Prof. Dani
24	Engineering Mechanics	http://nptel.ac.in/courses/112103108/	Prof. U.S. Dixit Dr. G. Saravana Kumar, IIT Guwahati	Engineering Mechanics	Prof. Franklin
25	Engineering Mechanics	http://nptel.ac.in/courses/112103109/	Prof. U.S. Dixit, IIT Guwahati	Engineering Mechanics	Prof. Franklin
26	Fluid Machinery	http://nptel.ac.in/courses/112104117/	Prof. Gautam Biswas Prof. S. Sarkar Prof. S.K. Som, IIT Kanpur	Fluid Mechanics and Machinery	Prof. Jackson Thanga Roy

D. Working models/charts/monograms

Experiment details charts are displayed in all laboratories

Faculty using physical models and 3D models at the time of teaching Engineering Graphics in 1st semester



Figure 5.7.3 Working Models

5.7.4 Consultancy (from industry)

2019-20

Project Title	Duration	Funding Agency	Amount
Silk Cotton Threshing Machine	6 Months	AWED	2,15,000
			Total Amount(X): 2,15,000

2018-19

Project Title	Duration	Funding Agency	Amount
Coconut De-husker Machine	6 Months	JTR Fibers	65,000
Virgin oil Extractor machine	1 Year	JTR Fibers	3,10,000
			Total Amount(Y): 3,75,000

2017-18

Project Title	Duration	Funding Agency	Amount
Cap Recycler	6 Months	Nirmal Caps, Kuzhiturai	80,000
			Total Amount(Z): 80,000

Cumulative Amount (X+Y+Z) = 6,70,000.00

5.8. Faculty performance Appraisal and Development System (FPADS) (30)

The Institution has an effective Performance Appraisal System for the Faculty based on Teaching learning Process, Research Contribution, Professional Development and Institutional Promotion activities. Every faculty has to fill his/her Performance in a Faculty Appraisal Form at the end of every Academic year

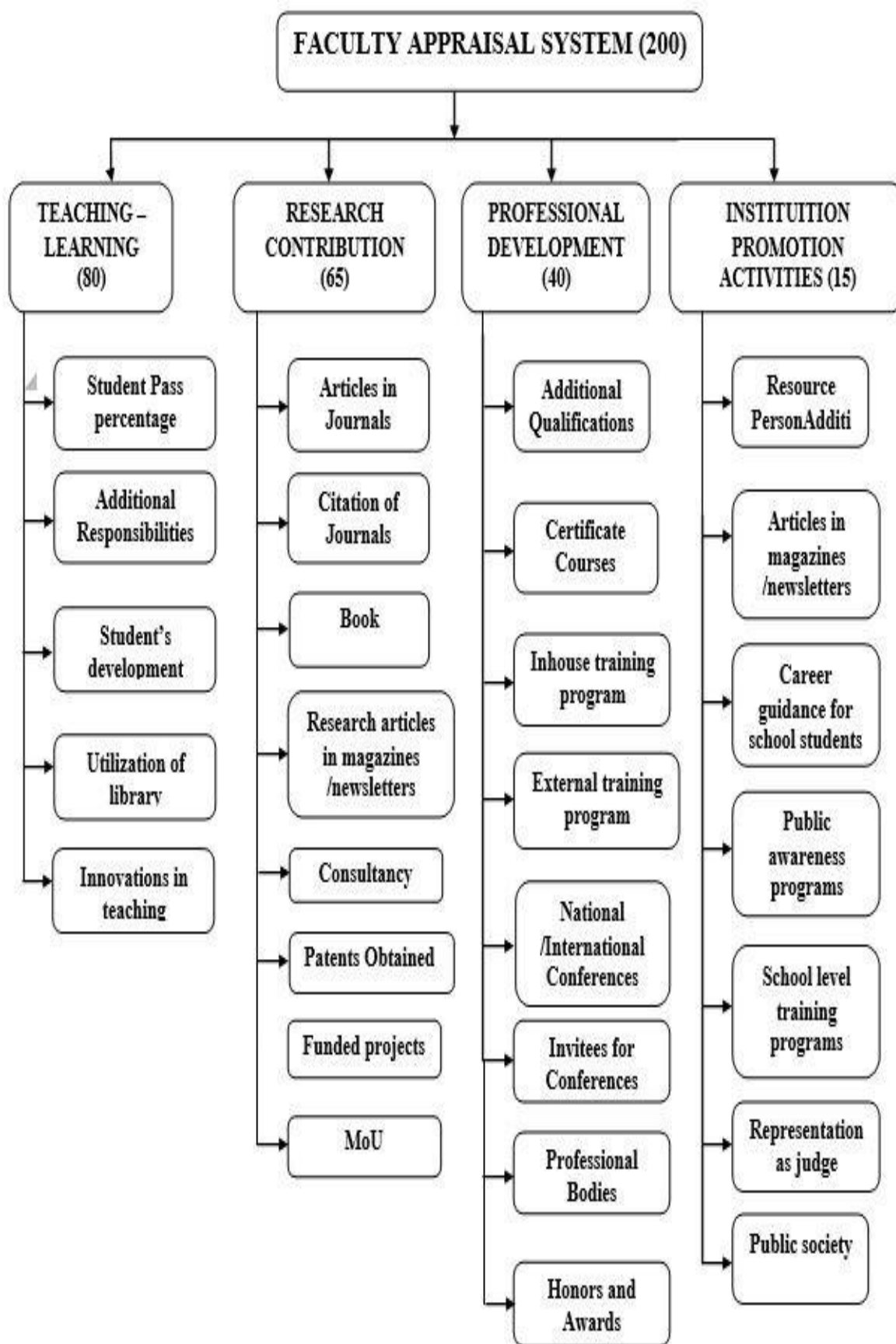
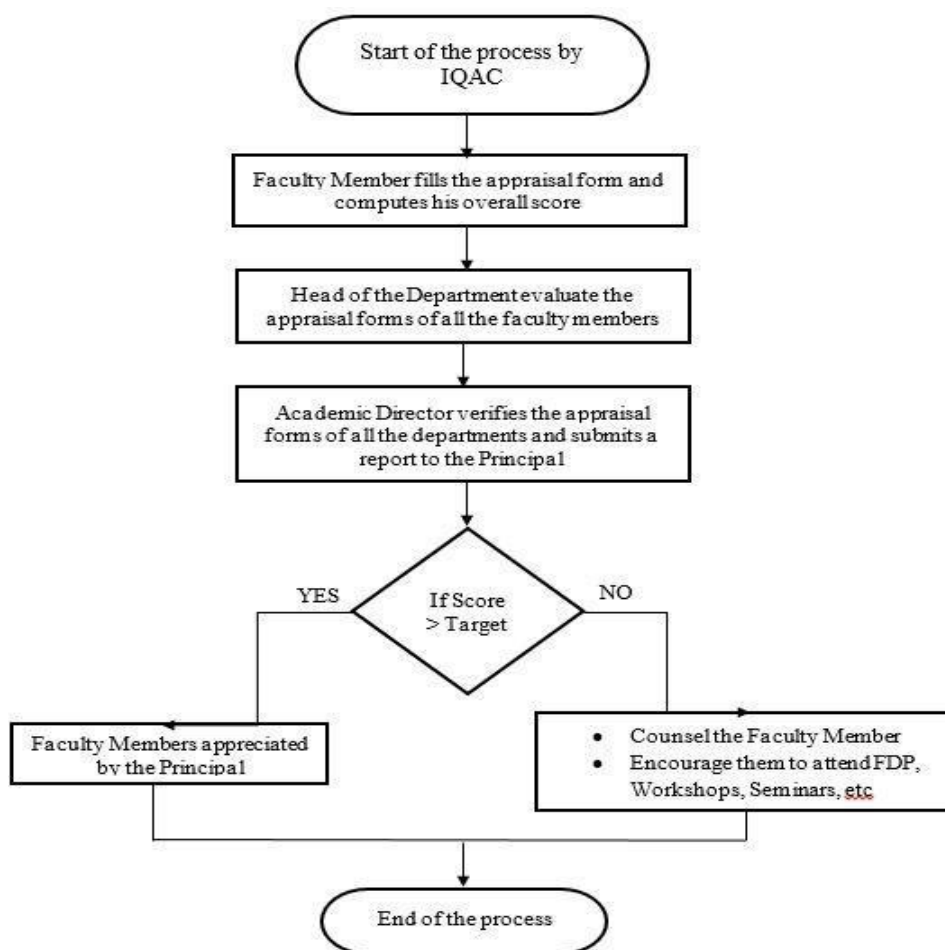


Figure 5.8 (a) Faculty Appraisal Parameters



The Process for Faculty Appraisal is Given below


Figure 5.8 (b) Faculty Appraisal Process

Implementation and Effectiveness

- The faculty Appraisal Form is Evaluated by the Head of Department.
- The Academic Director analyze the Faculty Appraisal form for all the faculty members and submit the report to the Principal.
- The Principal approves and recommends to the management and implement the effective measures through the Head of Department.
- The faculty will be notified with their Performance and encourage them to come out of the weakness if any.

The faculty members who have good score are appreciated by the management.

Sample Appraisal Form

FACULTY PERFORMANANCE APPRAISAL SYSTEM							
Faculty Name : C.Gigin Durai				Department : Mechanical Engineering			
Name		: C.Gigin Durai					
D.O.J		: 02-07-2015					
Email id		: gigin@marephraem.edu.in					
Present Designation and from which date: AP							
Department		: Mechanical Engineering					
Address and Phone No		: 7200722996					
D.O.B		: 28-06-1992					
I. <u>TEACHING LEARNING – (Max 80 marks)</u>							
(A) Students Pass Percentage (Max 50 Marks)							
Semester	Course Name	Percentage	R.C	Marks	S/O+ Grade	Mark	Total (Max 35)
ODD	Engg Graphics	96 %	93	30	-	-	30
ODD	Computer Integrated Manufacturing (PG)	80 %			-	-	
EVEN	Production Planning and Control	79 %			-	-	
EVEN	Environmental Science and engineering	82.3 %			-	-	
(B) Student Feedback (Max 5 Marks)							
Average Student Feed back				Mark			
8.6				5			
 Mar Ephraem College of Engineering and Technology							

FACULTY PERFORMANCE APPRAISAL SYSTEM

Faculty Name : C.Gigin Durai

Department : Mechanical Engineering

(C) Additional Responsibilities (Max 15 Marks)

Sl. No	Additional Responsibility	Marks	Total
1	Cells and Committee In-charge	2.5	5
2	Mar Festa Intercollegiate Cultural	3	
3	Tribal Development Cell	2	
4	Auto Expo Incharge	1	

(D) Students Development (Max 30 marks)

1. Contribution as guide to present paper in Conference (5 marks)

Sl.No	Name of the student	Conference	Title of the paper presentation	Marks	Total
-	-	-	-	-	-

2. Extent of participation in establishing product development labs (10 marks)

Sl.No	Name of the Lab	Established /Initiated	Funded By	Number of Students Attended	Marks	Total
-	-	-	-	-	-	-

3. Webinar / Video conferencing facility / ICT (3 Marks)

Sl.No	Topic	Webinar / Video conferencing facility / ICT	Number of students participated	Date	Marks	Total
1	Basic Civil and Mechanical Engineering	Video Lecture	39	21-2-2019	3	3
2	Production Planning and Control	PPT	60	23-2-2019	3	



Mar Ephraem
College of Engineering and Technology

FACULTY PERFORMANCE APPRAISAL SYSTEM

Faculty Name : C.Gigin Dural

Department : Mechanical Engineering

4. Institute Industry student linkage and relationship (5 Marks)

Sl.No	Linkage details	Industry/ Institute	Validity period	Marks	Total
-	-	-	-	-	-

5. Contribution for Students Projects (5 Marks)

Sl.No	Name of the student	Project Name	Funded By / Project Expo	Marks	Total
-	-	-	-	-	-

6. Contribution for molding the student to participate in Co-Curricular events (5 Marks)

Sl.No	Name of the student	Event Name	Winner / Participation	Marks	Total
1	Febin Roy & Team (2015-19)	SAE SUPRA	Participation	3	3

7. Contribution for molding the student to participate in Extra-Curricular events (5 Marks)

Sl.No	Name of the student	Event Name	Winner / Participation	Marks	Total
1	Martin Mano(2015-19)	Lathe Master	Winner	2	4
2	Vipin Wilson(2015-19)	Photography	Winner	2	

**Mar Ephraem**

College of Engineering and Technology

FACULTY PERFORMANCE APPRAISAL SYSTEM

Faculty Name : C.Gigin Durai

Department : Mechanical Engineering

8. Mentoring and guidance services (5 Marks)

Sl.No	Number of the students	Average no. of time spent	Pass Percentage	Marks	Total
1	21	18 Hrs	55	1	1

9. Role as Class In-charges (10 Marks)

Sl.No	Class	Marks	Pass Percentage	Marks	Total
1	IV Mech 2018	5	-	-	5
2	-	-	-	-	-
Total					5

(D) Utilization of Library (Max 5 marks)

Sl.No	Names of Journals	Names of Magazines	Journal / Magazine Subscription	e-journal facilities	Total
-	-	-	-	-	-
Mark	-	-	-	-	-

(E) Innovations / Contributions in Teaching / other related works (Max 5 marks)

Sl.No	Subject	Marks	Total
1	Innovation in Teaching – Working Model Demonstration in Thermal Lab for BCM	2	2



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Department : Mechanical Engineering

II RESEARCH CONTRIBUTION (Maximum 65 Marks)

(A) Articles in Journals National / International (Max 10 marks)

Article Name	Index	Author	Marks	Total
-	-	-	-	-

(B) Citation of Journals (Max 5 marks)

Article Name	Cited	Marks	Total
-	-	-	-

(C) Research Articles in Newspapers / Magazines* / Newsletters, etc., (Max 5marks)

Article Name	Published In	Marks	Total
-	-	-	-

(D) Details of consultancy activities (Max 10 marks)

Area of Consultancy	Project title	Organization	Duration	Amount Received	Marks	Total
-	-	-	-	-	-	-
-	-	-	-	-	-	-

(E) Patents obtained (Product / Process / Technology transfer) (Max 5 marks)

Patent Name	Marks	Total

(F) Funded Projects (Max 20 Marks)

Project Name	Funded by	PI/Co-PI/Member	Marks	Total
Communication Training for Tribal Students of Kanyakumari District	NCSTC-DST	Co-PI	8	8

(G) MOU(Active) – (Max 5 Marks)

Sl.No	Industry/ Institute	Validity period	Marks	Total
-	-	-	-	-



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Department : Mechanical Engineering

III PROFESSIONAL DEVELOPMENT (Maximum 40 Marks)**(A) Additional Qualifications acquired (Max 10 Marks)**

Sl.No	Additional Qualification	University	Marks	Total
-	-	-	-	-

(B) Certificate Courses/ Diploma courses (Max 5 Marks)

Sl.No	Course Name	University	Marks	Total
-	-	-	-	-

(C) Details of Inhouse training program (Max 5 Marks)

Name of the training program	Date / Duration of the training program	Training Topics	Name of the Resource person	Marks	Total
-	-	-	-	-	-

(D) Details of External training program (Max 8 marks)

Name of the training program	Nature of the training program	Date / Duration of the training program	Training Topics	Whether the training topics discussed among the other staff & give their names	Marks	Total
Student Induction	FDP	26-07-2018	-	Yes	2.5	7.5
ARAI Workshop	FDP	1 Day	-	Yes	2.5	
Recent trends in Renewable Energy Resoures	FDP	3 Days	-	Yes	2.5	



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Faculty Name : C.Gigin Dural

Department : Mechanical Engineering

(E) National /International Conferences in India and abroad (Max 8 marks):

S.No	Name of the Conference	National / International	Date / Duration	Venue	Mark	Total
1	-	-	-	-	-	-

(F) Invitations for Conferences/Seminars/Workshops/Symposia (Max 5marks)

S.No	Name of the Conference	National / International	Date / Duration	Invited as	Mark	Total
1	-	-	-	-	-	-

(G) Professional Bodies/Chapter (Max 5marks)

S.No	Name of the Professional Body/Chapter	Membership Details	Marks	Details of Program organized	Students' chapter In-charge (Yes/No)	Mark	Total
1	SAE	Member	4	SAE SUPRA Orientation Orogram	No	1	5

(H) Books (Max 5 marks)

Book Name	ISBN/Without ISBN	Marks	Total
-	-	-	-

(I) Honors and Awards (Max 40 marks)

S.No	Name of the Award	Internal / External Agencies	Marks	Total
1	-	-	-	-



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Faculty Name : C.Gigin Durai

Department : Mechanical Engineering

IV Institutional Promotion Level Activities (Maximum 15 Marks)

(A) Resource person for Continuing education program / Off Campus Training program

Sl.No	Name of the program	Continuing education program / Off Campus Training program	Marks	Total
1	Communication Training Program	-	5	5

(B) Articles in Newspapers / Magazines

Sl.No	Article Name	Newspaper/Magazine	Issue No/Date	Marks	Total
-	-	-	-	-	-

(C) Student development / Career Guidance for School students in Radio, TV and Social media

Sl.No	Program Name	Radio/TV/Social Media	Date	Marks	Total
1	Motivational Program	Puthiya Thalaimurai TV	-	2.5	2.5

(D) Public Awareness program in Radio, TV and Social media

Sl.No	Program Name	Radio/TV/Social Media	Date	Marks	Total
1	Public Awareness about places	Radio		2.5	5
2	Social Awareness Program	Social Media		2.5	

(E) School level Training programs

Sl.No	Program Name	School	Technical program / Career Guidance program / Expos etc	Date	Marks	Total
1	Project Expo	Technical Event	Mentor		2.5	5
2	Hands on Training	INSPIRE	Trainer		2.5	

(F) Representation as Judge

Sl.No	Event Name and venue	Sports/Arts/Technical Events	Role	Date	Marks	Total
1	Science Exhibition at St.MGHSS	Technical Event	Guest and Judge		2.5	2



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FACULTY PERFORMANCE APPRAISAL SYSTEM

Faculty Name : C.Gigin Durai

Department : Mechanical Engineering

(G) Public Society /Technical Societal Recognition

Sl.No	Recognition	Organization / Society Name	Marks	Total

How Mar Ephraem can utilize you:

I am good at digital documentation and Virtual teaching. So the Institution can utilize me in that track regard.

Summary of Performance Appraisal

Teaching Learning (Max 80 Marks)	Research Contribution (Maximum 65 Marks)	Professional Development (Maximum 40 Marks)	Institutional Promotion Level Activities (Maximum 15 Marks)	Total (200 Marks)
58	8	12.5	15	93.5

Submitted By

(Amrutha) C.Gigin Durai (AP)

**Mar Ephraem**
College of Engineering and Technology

FACULTY PERFORMANCE APPRAISAL SYSTEM

Faculty Name : C.Gigin Durai

Department : Mechanical Engineering

Summary of Performance Appraisal

Teaching Learning (Max 80 Marks)	Research Contribution (Maximum 65 Marks)	Professional Development (Maximum 40 Marks)	Institutional Promotion Level Activities (Maximum 15 Marks)	Total (200 Marks)
58	8	12.5	15	93.5

Remarks by HoD



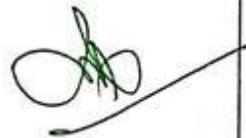

Verified, data provided are found to be correct, Management can utilize in virtual platform.

Remarks by Academic Director

Institutional Promotion activities are appreciated. Research Contribution is very low and need more attention.

Approval and Recommendation by Principal

Approved and Recommended

HoD	Academic Director	Principal	Correspondent
			



Mar Ephraem

College of Engineering and Technology

5.9. Visiting/Adjunct/Emeritus Facultyetc. (10)

AcademicYear2018-2019

Table5.9(a):VisitingFaculty2018-2019

Sl. No.	Semester /Subject	Name & Designation of theVisitingfaculty	University/College/Industry	Hours/Semester
1	5/Design &Fabrication Project	Er.B.S.BerlinRaj/Project Manager	CADDTechnologies	52
2	8/ Design &AnalysisProject	Er.KAugustinRaj/Project Assistant	CADDTechnologies	58

AcademicYear2017-2018

Table 5.9 (a):VisitingFaculty2018-2019

Sl. No.	Semester /Subject	Name & Designation of theVisitingfaculty	University/College/Industry	Hours/Semester
1	5/Design &FabricationProject	Er.B.S.BerlinRaj/ProjectManager	CADDTechnologies	52
2	8/ Design &AnalysisProject	Er.KAugustinRaj/Project Assistant	CADDTechnologies	54

AcademicYear2016-2017

Table5.9 (a):VisitingFaculty2018-2019

Sl. No.	Semester /Subject	Name & Designation of theVisitingfaculty	University/College/Industry	Hours/Semester
1	5/Design &FabricationProject	Er.B.S.BerlinRaj/ProjectManager	EltaTools&Dies	50
2	8/ Design &AnalysisProject	Er.KAugustinRaj/Project Assistant	CADDTechnologies	53

Criterion 6	Facilities and Technical Support	80
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6.1 Adequate and well-equipped laboratories, technical manpower (30)

SL.No	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	Engineering Practices Laboratory	2	1. Bench vice 2. Components for plumbing 3. Power Tools 4. Arc welding transformer 5. Centre lathe 6. Moulding table, foundry tools 7. Drilling Machine 8. Bench Grinder	18 Hrs	Mr. James Jeeva Aloysious	Lab Assistant	Diploma
2	Manufacturing Technology Laboratory	2	1. Centre Lathes 2. Milling Machine 3. Shaper 4. Planer 5. Grinding Machine 6. Radial Drilling Machine 7. lathe Tool Dynamometer	12 Hrs	Mr. V. Asbin Gil	Lab Assistant	Diploma

			8. Milling Tool Dynamometer 9. Gear Hobbing Machine 10. CNC Lathe 11. CNC Milling machine				
3	Fluid mechanics and machinery laboratory	2	1. Orifice meter setup 2. Venturi meter setup 3. Rotameter setup 4. Pipe Flow analysis setup 5. Centrifugal pump/submersible pump setup 6. Reciprocating pump setup 7. Gear pump setup 8. Pelton wheel setup 9. Francis turbine setup 10. Kaplan turbine setup	24 Hrs	Mr. Edwin Paul	Lab Assistant	Diploma
4	Thermal Engineering laboratory	2	1. 4-stroke Diesel Engine with mechanical, Hydraulic and Electrical loading 2. Multi-cylinder Petrol Engine	12 Hrs	Mr. Manoj Sejo	Lab Assistant	Diploma

			3. Data Acquisition system with any one of the above engines 4. Steam Boiler with turbine setup 5. Heat transfer study equipment 6. Heat exchanger apparatus 7. Two stage reciprocating air compressors 8. Refrigeration test rig 9. Air-conditioning test rig 10. Fluidized Bed Cooling Tower				
5	Strength of Materials Laboratory	2	1. Universal Tensile Testing machine 2. Computerized Universal Testing Machine 3. Torsion Testing Machine 4. Impact Testing Machine 5. Brinell Hardness Testing Machine 6. Rockwell Hardness Testing Machine 7. Spring Testing Machine	24 Hrs	Mr. Edwin Paul	Lab Assistant	Diploma

6	Dynamics Laboratory	2	<ol style="list-style-type: none"> 1. Cam follower setup 2. Motorized gyroscope 3. Governor apparatus 4. Whirling of shaft apparatus 5. Dynamic balancing machine 6. Two rotor vibration setups 7. Spring mass vibration system 8. Torsional Vibration of single rotor system setup 9. Turn table apparatus 10. Transverse vibration setup 	12 Hrs	Mr. Sunil	Lab Assistant	Diploma
7	Metrology and Measurements laboratory	2	<ol style="list-style-type: none"> 1. Micrometer 2. Vernier Height Gauge 3. Vernier depth Gauge 4. Slip Gauge Set 5. Floating Carriage Micrometer 6. Profile Projector 	12 Hrs	Mr. Subin R S	Lab Assistant	Diploma

			7. Tool Makers Microscope 8. Comparators 9. Autocollimator 10. Bore gauge 11. Telescope gauge				
8	CAD/CAM & Simulation and Analysis Laboratory	1	1. Computer Server 2. CNC Lathe 3. CNC milling machine 4. Computer Workstation 5. Color Desk Jet Printer	12 Hrs	Mr. Bibin	Lab Instructor	Diploma
9	Mechatronics Laboratory	2	1. Basic Pneumatic Trainer Kit 2. Basic Hydraulic Trainer Kit 3. Hydraulics and Pneumatics Systems Simulation Software 4. 8051 - Microcontroller kit with stepper motor and drive circuit sets	12 Hrs	Mr. Sunil	Lab Instructor	Diploma

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Sr.No.	Facility Name	Details	Reasons for creating facility	Utilization	Areas in which students are expected to have	Relevance to
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					enhanced learning	POs/PSOs
1	Engine dismantling and assembling facility	This facility contains basic automobile parts including engines and its parts, chassis, transmission parts like clutch, gearbox, propeller shaft, rear wheel, differential and a demo car.	To reinforce practical exposure on automobiles, equip the students to prepare for competitions such as SAEINDIA SUPRA, BAJA and provide placements in automotive industries.	12 hours per semester	Automobile Engineering	P01
2	Materials testing facility	This facility consists of Polishing machine for metallurgical specimen preparation.	To fabricate and test composites and alloys.	12 hours per semester	Material Science	P01, PS02
3	Rapid Prototyping facility	Ultimaker 3D Printer	To create prototypes from design.	12 hours per semester	Additive Manufacturing	P05
4	Fabrication facility	Capstan Lathe, Turret Lathe and Planning machine	To fabricate identical metal parts and to cut slots and keyways for projects.	12 hours per semester	Manufacturing	P01, PS02

6.3. Laboratories: Maintenance and overall ambience

(10)

All the laboratories in the Department of Mechanical Engineering follow best maintenance practices to keep all the assets in good condition. The overall ambience of the laboratories is maintained at its best.

SL.NO	Name of the Laboratory	Maintenance Details	Frequency
1	Engineering Practices Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 7. The oil replacement cycle is usually carried out regularly to ensure hassle free operation of all equipment. 	Half yearly for general maintenance, and yearly for fire extinguisher
2	Manufacturing Technology Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 	Half yearly for general maintenance, and yearly for fire extinguisher

		<ol style="list-style-type: none"> 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 7. The oil replacement cycle is usually carried out regularly to ensure hassle free operation of all equipment. 	
3	Fluid Mechanics and Machinery Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 	Half yearly for general maintenance, and yearly for calibration and fire extinguisher

		<ol style="list-style-type: none"> Regular cleaning and wipe down of all equipment exterior is carried out. The oil replacement cycle is usually carried out regularly to ensure hassle free operation of all equipment. Water used in this laboratory is replaced periodically to prevent impurities enters in to the equipment. 	
4	Thermal Engineering	<ol style="list-style-type: none"> Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. Major repairs and reconditioning is carried out by external expertise. All checking and repairing of equipment are recorded in a Maintenance register. Lab audit is carried out during semester vacation. Regular cleaning and wipe down of all equipment exterior is carried out. The oil replacement cycle is usually carried out regularly to ensure hassle free operation of all equipment. 	<p>Half yearly for general maintenance, and yearly for calibration and fire extinguisher</p>

5	Strength of Materials Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 7. The oil replacement cycle is usually carried out regularly to ensure hassle free operation of all equipment. 	Half yearly for general maintenance, and yearly for calibration and fire extinguisher
6	Dynamics Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 	Half yearly for general maintenance, and yearly for calibration and fire extinguisher

		<ol style="list-style-type: none"> 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 	
7	Metrology and Measurements Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis. 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 	Half yearly for general maintenance, and yearly for calibration and fire extinguisher
8	Mechatronics Laboratory	<ol style="list-style-type: none"> 1. Preventive maintenance is practiced in this 	Half yearly for general maintenance, and

		<p>laboratory. All the equipment is maintained periodically as per the manufacturer's recommendation and on need basis.</p> <ol style="list-style-type: none"> 2. Laboratory staff ensures all equipment is functioning well and seeks external expertise if needed. 3. Major repairs and reconditioning is carried out by external expertise. 4. All checking and repairing of equipment are recorded in a Maintenance register. 5. Lab audit is carried out during semester vacation. 6. Regular cleaning and wipe down of all equipment exterior is carried out. 	yearly for calibration and fire extinguisher
9	CAD / CAM Laboratory	<ol style="list-style-type: none"> 1. All computers are checked for suitability at the start of semester. 2. All checking and repairing of equipment are recorded in a Maintenance register. 3. Lab audit is carried out during semester vacation. 4. Regular cleaning and wipe down of all equipment exterior is carried out. 	Half yearly for general maintenance, yearly for fire extinguisher

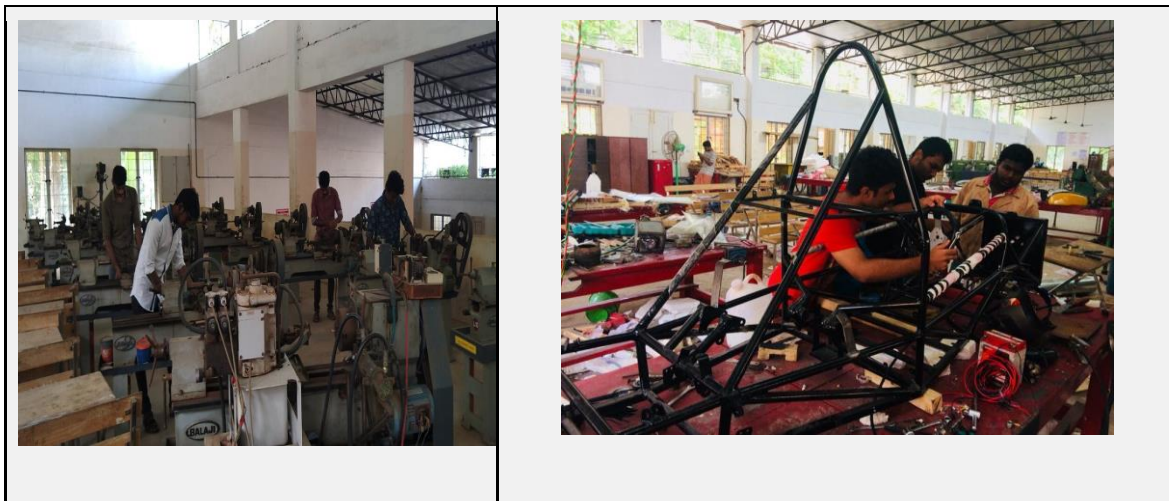
1. All the laboratories have the well-experienced technicians to train the students.
2. Effective lighting systems are provided in all laboratories.
3. Proper ventilations are provided in all laboratories.
4. All the labs are equipped with green board/White board.
5. All the laboratories are equipped with proper furniture for seating.
6. CAD/CAM lab is equipped with LCD Projector and online smart resources.
7. Sufficient time is given to the students to utilize the laboratories.
8. Do's and Don'ts are displayed in the laboratories.
9. Uninterrupted power supply is provided to all laboratories.

6.4. Project laboratory

(5)

Project Fabrication Laboratory

There are two fabrication laboratories with the surface area of 26' x 56' and 40' x 40'. These laboratories are created to support our final and pre final year students to do in-house projects. This lab consists of Bosch power tools, basic tools for fabrication, power saw, anvil, machine vice, work bench, CNC pipe bending machine, CNC bar bending machine, Rapid prototyping facility and welding machines. Assembly of projects can be done in this lab. Flexible working hours is provided based on need. Apart from curriculum projects, students can use this facility to conceive, design, and build vehicles for SAE and other design competitions.





6.5. Safety measures in laboratories

(10)

Sl.No	Name of the Laboratory	Safety Measures
1	Engineering Practices Laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted. 8. Wearing a Welding shield or goggles is compulsory during welding.
2	Manufacturing Technology Laboratory	<ol style="list-style-type: none"> 1. Standard operating procedures are followed for all machineries. 2. All electrical equipment is grounded properly in order to prevent electric shocks and ensure safety. 3. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 4. Girls should bind the hair. 5. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items.

		<ol style="list-style-type: none"> 6. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 7. First aid kits are provided in all the laboratories. 8. Wearing wrist watches, rings, bangles and bracelets are not permitted. 9. Wearing a Welding shield or goggles is compulsory during welding.
3	Fluid mechanics and machinery laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment does not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.
4	Thermal Engineering laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.
5	Strength of Materials Laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair.

		<ol style="list-style-type: none"> 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.
6	Dynamics Laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.
7	Metrology and Measurements laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.
8	CAD/CAM and Simulation Laboratory	<ol style="list-style-type: none"> 1. General Rules of Do's and Don'ts are displayed. 2. Fire Extinguisher and First Aid Kits are kept. 3. All electrical equipment is grounded properly in order to prevent electric shocks and ensure safety. 4. Antivirus software is installed in every computer.

9	Mechatronics Laboratory	<ol style="list-style-type: none"> 1. All machineries in the lab are properly grounded. 2. It is mandatory to wear an apron/coat and shoes compulsorily by all students. 3. Girls should bind the hair. 4. Stored items or equipment do not block access to the fire extinguisher(s), safety equipment, or other emergency items. 5. Hallways are kept free of boxes and materials so that exits and normal paths of travel are not blocked. 6. First aid kits are provided in all the laboratories. 7. Wearing wrist watches, rings, bangles and bracelets are not permitted.

Criterion 7 CONTINUOUS IMPROVEMENT 50			
POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2	2.37	Students were up to the expected level to apply their basic mathematics, science, and Engineering knowledge in various Mechanical Engineering courses. The Observations are • Students found the knowledge gained through bridge courses useful. • Students found the tutorial hours to improve their knowledge in Engineering problems useful. • Students felt the Seminar provided on "Multiple solutions of real time engineering problems" useful.
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Faculty are advised to solve end chapter problems available in the textbook.			
PO 2 : Problem Analysis			
PO 2	2	1.79	Students were not up to the expected level to analyze and develop solutions to complex Mechanical Engineering problems. The Observations are • Students didn't gain knowledge of real time engineering problems through industrial training/industrial visits. • Students underwent projects based on the problem identified through the literature review. • Students found the Seminar on "Problem analysis and multiple solutions of an engineering problem" useful.
The above actions are continued, to achieve the target the following action is taken Action 1: Group projects based on analysis of collected data reaching substantiated conclusions using literature are encouraged.			
PO 3 : Design/development of Solutions			
PO 3	2	1.53	Designing, implementation, and evaluation skills of students with realistic constraints were not up to the expected level. The Observations are • Design projects by the students were not based on specifications. • Students found the Seminar on "Non – functional requirements of product design" useful. • Students found the Seminar on "Testing Process to validate the designed product" useful.
The above actions are continued, to achieve the target the following action is taken Action 1: Students are encouraged to do real time design projects using Data Book.			

PO 4 : Conduct Investigations of Complex Problems			
PO 4	2	1.98	<p>Students were not up to the expected level to use their research-based knowledge to analyze societal challenges and to provide valuable conclusions. The Observations are</p> <ul style="list-style-type: none"> • Students found the Seminar on Research methods in Mechanical Engineering useful • Students have done analysis and interpretation of data in their projects. • Students have done Experimental/ testing projects.
<p>The above actions are continued, to achieve the target the following action is taken Action 1: Students are encouraged to present the results of academic projects in a professional manner.</p>			
PO 5 : Modern Tool Usage			
PO 5	2	2.31	<p>Students were up to the expected level to use modern tools and techniques. The Observations are</p> <ul style="list-style-type: none"> • Students found the Value added courses on the latest modeling software useful. • Students found the Hands-on training on "Application of CFD" useful. • Students found the Seminar on "Limitations of simulation software in real Engineering problems" useful.
<p>The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Hands on training are provided on Coordinate Measuring Machine.</p>			

PO 6 : The Engineer and Society			
PO 6	2	2.33	<p>Students were up to the expected level by gaining knowledge of societal, health, safety, legal, and cultural issues. The Observations are • Students were able to identify the societal challenges through challenge identification competition. • Students have done the projects incorporating society's needs.</p> <p>• Students were involved in social activities via Cells.</p>
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Seminar on Social responsibilities implied in professional practices are provided.			
PO 7 : Environment and Sustainability			
PO 7	2	2.26	<p>Students were up to the expected level to understand the current technological development and its impact on sustainability. The Observations are • Students found the Seminar on "India - Great market for E-vehicle" useful. • Students understand the impact of engineering on the environment during the discussion in the class sessions. • Students found the Seminar on "Bharat stage 6 Emission concept and challenge" useful.</p>
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Students are exposed to the working principle of the biogas plant.			

PO 8 : Ethics			
PO 8	2	2.33	Students were able to understand the importance of ethics in professional practice. The Observations are • Students found the Seminar on the "Code of ethics for practice Engineers" useful. • Students found the Seminar on "Engineers' responsibility for safety" useful.
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Seminar on Nature of ethical problems and moral reasoning on engineering practices are provided by the expert.			
PO 9 : Individual and Team Work			
PO 9	2	2.36	Students should perform effectively as an individual and also as a member of a team for attending a good career and to participate in societal events. The Observations are • Students have done the pre-final year projects as teams. • Students have participated and led in symposiums, co-curricular and extracurricular activities in college events. • Students involved in Group discussions during classroom sessions.
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Students Activities through e-groups are encouraged.			
PO 10 : Communication			
PO 10	2	2.28	Students were able to communicate effectively on their Engineering activities. The Observations are • Students found the Communication skills and soft skill development training useful. • Students presented their project work in the reviews. • Students presented Seminars during Seminar hours.
The above actions are continued, to achieve the enhanced target the following action is taken Action 1: Students are encouraged to give feedback on the presented activity.			
PO 11 : Project Management and Finance			
PO 11	2	2.57	Students had achieved enough engineering and managerial skills for developing projects. The Observations are • Students systematically planned their project based on time and budget constraints • Students found the Seminar on "Project Management" useful. • Students found the Seminar on "Preparation of balance sheet in an organization" useful.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Seminar on cost estimation in project is given.			
PO 12 : Life-long Learning			

PO 12	2	2.07	Lifelong learning is a must to sustain in the field of Engineering. Hence the students had understood the need and achieved the target. The Observations are • Students equipped themselves with the required skills to complete their projects. • Students felt the need for lifelong learning and higher studies during the class session. • Students did certificate courses to acquire knowledge outside the classroom.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Participation and completion of online courses are encouraged.			

PSOs Attainment Levels and Actions for Improvement- (2019-20)

PSOs	Target Level	Attainment Level	Observation
PSO 1: Able to perform thermal analysis of mechanical systems			
PSO 1	2	2.27	Students were up to the expected level to perform thermal analysis of the mechanical system. The Observations are • Students found the Seminar on "HVAC System" useful. • Students did real-time thermal analysis projects. • Students found the Workshop on "Computational Fluid Dynamics" useful.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Workshop on "FEA – Thermal Analysis" is provided.			

PSO 2: Able to evolve design solutions to mechanical products

PSO 2	2	2.21	Students were up to the expected level to perform design analysis of the mechanical system. The Observations are • Students did their Pre-final year project based on the design of mechanical products. • Students did value- added courses on the design software. • Students found the Training on "Finite Element Analysis" useful.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Students are encouraged to do real time design projects using software.			

PSO 3: Able to analyze manufacturing Engineering problems and provide Fabrication solutions

PSO 3	2	2.33	Students were up to the expected level to analyze manufacturing Engineering problems and provide Fabrication solutions. The Observations are • Students fabricated working models during their Pre-final year project • Students found the Seminar on "Recent Trends in Manufacturing" useful. • Students found the Workshop on "Fabrication of composites" useful.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Workshop on 'Additive manufacturing' is provided.			

7.2. Academic Audit and actions taken thereof during the period of Assessment (10)

Audit Process:

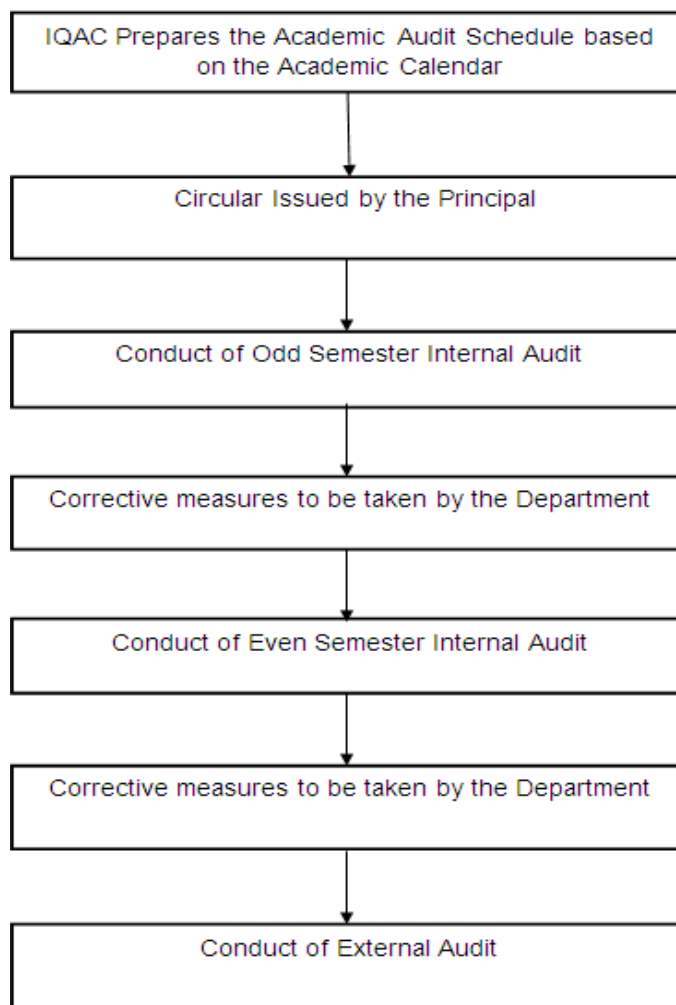


Figure 7.2(a): Audit Process

Audit - Committee Members:

Table: 7.2(a) Internal Audit Member

S.NO	NAME	DESIGNATION	DEPARTMENT
1.	Mrs.HERLIN L.T	Assistant Professor	Computer Science and Engineering
2.	Mr.ABISHEK.G.L	Assistant Professor	Civil Engineering
3.	Mr. ALDOUS HUXLEY J.R.	Assistant Professor	Electrical and Electronics Engineering


Table: 7.2(ba) External Audit Member

S.NO	NAME	DESIGNATION	DEPARTMENT	INSTITUTION
1	Dr.P.PRATHAP	Professor & Head	Mechanical Engineering	Sri Krishna College of Technology Kovaipudur, Coimbatore -641042

Frequency of Audit:

- Internal Audit – Twice a year(one per semester)
- External Audit - Once in a year

Audit sheets:



Mar Ephraem

College of Engineering and Technology

Department of Mechanical Engineering

Academic Audit for Individual Courses

Date of Audit : 04/12/2018
 Auditor Name : Mr. Abhishek G.L AP/Civil, Mr. Abdous Hoxely J.R AP/EEE
 Designation : Mrs. Heelin L.T AP/CSE
 Department/Institution : Mar Ephraem College of Engineering & Technology

S.No	Audit Description	Remarks
1.	Academic Year & Semester	2018 - 2019, 06
2.	Course Code & Name	ME6603, Finite Element Analysis
3.	Course offered for (Year & Semester)	III, 06
4.	Course Co-ordinator	Mr. Jackson Thanga Roy
5.	Course In-charge	Mr. Joseph Benciel
6.	Qualification & Specialization	M.E. CAD
7.	Designation	Assistant Professor
8.	Experience (Y&M)	5 Y & 5 M
9.	How many times the same course is handled by the faculty members?	2
10.	Availability of Lecture Plan	Available
11.	Availability of Course Information	Available
12.	Quality of Internal Assessment Components	Excellent / Very Good / Adequate / Not Standard
13.	Availability of course materials / Laboratory manuals for audited course and the quality	Available / Not Available Excellent / Very Good / Adequate / Not Standard
14.	Whether the Cos are framed appropriately for measurable outcomes? (please rate)	Excellent / Very Good / Adequate / Not Standard
15.	Quality of Cos mapping with appropriate RBT level	Excellent / Very Good / Adequate / Not Standard
16.	Quality of question papers of CIA tests (1, 2 & Model Examination)	Excellent / Very Good / Adequate / Not Standard
17.	Quality of questions for assessment components	Excellent / Very Good / Adequate / Not Standard
18.	Quality of COs mapping with POs and PSOs	Excellent / Very Good / Adequate / Not Standard
19.	Whether attainment level of COs is justified?	Fully Justified / Partially Justified / Not Justified
20.	Whether attainment level of COs is calculated appropriately?	Properly Calculated / Calculated but need improvement / Not Calculated
21.	Target level and final attainment for each Cos (in %)	CO1: Target(.2..%) Attained (.2..%) CO2: Target(.2..%) Attained (.3..%) CO3: Target(.2..%) Attained (.3..%) CO4: Target(.2..%) Attained (.3..%) CO5: Target(.2..%) Attained (.3..%) CO6: Target(.2..%) Attained (.3..%)
22.	Whether the loop is closed by incorporating appropriate correction action? If yes, please specify the corrective actions carried out by the course in charge	-
23.	Appropriateness of the corrective actions carried out for meeting the attainment level (please rate)	Excellent / Very Good / Adequate / Not Standard
24.	Whether the overall contribution of the course for each POs and PSOs is calculated appropriately?	Excellent / Very Good / Meeting the Expectations / Need Improvement

Figure 7.2(b): Sample Audit Sheet of Individual Course



Mar Ephraem

College of Engineering and Technology

DEPARTMENT OF MECHANICAL ENGINEERING

Internal Academic Audit - Action Plan

Sl. No	Activity	Date	Report (Y/N)	Responsible Person	Signature	Remarks
1	Career Readiness Program for IV Year	16/08/19	Y	Mrs. Dr. Melba Kani		-
2	Industrial Visit For III YEAR	08/08/19-10/08/2019	Y	Mr. Arun		-
3	Industrial Visit For II YEAR	09/08/2019-10/08/2019	Y	Mr. Franklin G		-
4	Certificate Course II Year - Solid works	09/07/2019-10/04/2020	Y	Mr. Dani		-
5	Self Awareness and Goal Setting For Second Year Students	22/02/2020	Y	Mr. Akhil W V		-
6	Spoken English class For Second Year Students	Thursday (Evening 4-6 pm)	Y	Mr. Akhil W V		-
7	Internship For Second, Third & Final Year Students	Vacation	Y	Mr. Manoj		-
8	PTA meeting For Second, Third & Final Year Students	15/02/2020	Y	Mr. Gigin Durai		-
9	Automobile Practical Program for Third Year	28/02/2020	Y	Mr. John Inuthya Raj		-
10	Program Assessment Committee	28/12/2019	X	Mr. Jackson Thanga Roy		-

Name & Signature of the HOD (Concerned department)

D. Rajeev. HOD/MECH

Names and Signatures of the verifying Internal Auditors

1. Mr. Abhishek G.L AP/CIVIL

2. Mr. Aldous Hoxely AP/EEE

3. Mrs. Heelin L.T AP/CSE

Figure 7.2(c): Sample Internal Academic Audit sheet of action plan



Mar Ephraem

College of Engineering and Technology

Department of Mechanical Engineering

EXTERNAL AUDIT 20.18. - 20.19. (ODD SEM & EVEN SEM)

S.No		Remarks
A. Department Profile		
1.	Vision, Mission, FEQ, PO and PSO	Available
2.	Faculty, Supporting Staff/Members details	Available
3.	Class Room/Lab/Seminar Hall/Faculty Room	Available
4.	Learning Resources	Available
B. Teaching and Learning Process		
1.	Innovations introduced in Teaching Learning Process	Available
2.	Innovations introduced in the Lab Courses	Available
3.	Teaching Methodology for Slow Learners	Available
4.	NPTEL, MOOC Courses for fast learners	Available
C. Content Delivering Process		
12.	Theory - Course Information, Course Materials & Delivery Methods	Available
13.	Lab Experiments, Equipments, Manuals, Stock Registers, Maintenance and Development	Available
14.	Projects	Available
15.	Feedback from students	Available
16.	Teaching Methodology for Slow Learners and Fast Learners	Available
17.	NPTEL, MOOC Courses for Fast Learners	Available
D. Assessments		
18.	Standard of Question Papers for Internal Examinations	Available
19.	Standard Worksheets for Internal Marks	Available
20.	Samples for Internal Components	Available
21.	Sample Lab Assessment Sheets	Available
22.	Details of Rubrics and Assessment	Available
E. Department Achievements		
1.	Students - Result Analysis	Available
2.	Details of Graduation	Available
3.	Details of Placement	Available
4.	Details of Higher Studies	Available
5.	Details of Students Major Achievements	Available
6.	Faculty - FDP, Seminars Attended and organized	Available
7.	Proposals Submitted and Funds received	Available
8.	Details of Patents Filed	Available

Overall Remarks:

Name & Signature of the Auditor:

Dx. P. Prathap

Figure 7.2(d): Sample External academic audit sheet

7.3. Improvement in Placement, Higher Studies and Entrepreneurship (10)Total Marks 10.00

Institute Marks : 10.00

Table 7.3: Improvement in Placement, Higher Studies and Entrepreneurship

Item	2016-2020	2015-2019	2014-2018
Number of Students Placed	51	104	100
Pay Package	Rs.1.5 lakhs to 10 lakhs per annum	Rs.1 lakhs to 6.7 lakhs per annum	Rs.1 lakhs to 6.7 lakhs per annum
No. of students admitted to higher studies	8	3	2
No. of students turned entrepreneurs in engineering	1	2	Nil

7.4. Improvement in the quality of students admitted to the program (10)Total Marks 10.00

Institute Marks : 10.00

Item		2020-21	2019-20	2018-19
National Level Entrance Examination	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others	No of students admitted	51	74	95
	Opening Score/Rank	78	86	89
	Closing Score/Rank	42	42	41
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	13	9	11
	Opening Score/Rank	80	80	77
	Closing Score/Rank	38	63	61
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		54	57	61

CRITERION 8	FIRST YEAR ACADEMICS	50
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8.1. First Year Student-Faculty Ratio (FYSFR) (5)

Faculty Name	Pan Number	Qualification	Date receiving highest degree			Specialization	Designation	Date of joining	Teaching load			Relieved Date	Regular/contract
			Date	Month	Year				CAY (2020-2021)	CAYm1 (2019-2020)	CAY m2 (2018-2019)		
Dr. Anila Rose M R	AEQPA 2105Q	Ph.D	16	July	2014	English	Professor	10.10.2018	100	100	50	10-05-2021	Regular
Dr.C. Nirmala Kumari	ADBPK 1852A	Ph.D	16	August	2015	Mathematics	Professor	1.03.2021	0	0	0		
Mrs. Jebapriya	AQHPJ 6253B	M.Sc., M.Phil, Ph.D	13	June	2007	Chemistry	Asst.Professor	14.09.2009	100	100	100		Regular
Dr. Seema A	DIQPS6 213G	M.Sc., M.Phil., Ph.D	17	February	2020	Chemistry	Asst.Professor	15-09-2009	100	100	100		Regular
Mrs. Simmi T	DHWPS 0231M	M.Sc., M.Phil	14	January	2008	Chemistry	Asst.prof	10.10.2010	100	100	100		Regular
Ms. Johnsy Sugitha	BCJPJ2 519P	M.Sc., M.Phil	20	July	2009	Chemistry	Asst.Professor	05.01.2015	100	100	100		Regular
Ms. Shijula Lindry	CXMP5 8725B	M.Sc.Mphil,	16	July	2007	chemistry	Asst.professor	12-01-2017	100	100	100	10-05-2021	Regular

Mr. Anish Kumar S	HFJPS7 984N	<u>M.Sc.</u> , M.Phil.	10	Nov emb er	20 14	Physics	Asst.Pr of	01- 03- 2019	100	100	0	Regula r
Ms. E. Petdami	CWWP P3081Q	M.Sc., M.Phil.	13	Oct obe r	20 08	Physics	Asst.Pr ofessor	23.09. 2011	100	100	100	Regula r
Mrs. Bindhu L.R	BCXPB 9886R	<u>M.Sc</u> ;M phil	10	Dec emb er	20 07	Mathem atics	Asst.Pr ofessor	14- 09- 2009	100	100	100	Regula r
Mrs. Asha Beulah B.P	BGRPA 1152M	<u>M.Sc.</u> , M.Phil	20	July	20 09	Mathem atics	Assista nt Profess or	19- 07- 2010	100	100	100	Regula r
Ms. Priya Viji T	BFHPP 1289P	<u>M.Sc.</u> , M.Phil	14	July	20 03	Mathem atics	Assista nt Profess or	12- 01- 2017	100	100	100	Regula r
Ms. R. Roselin Suhi	BWEPR 3815H	<u>M.Sc.</u> , M.Phil	3	Jan uar y	20 11	Mathem atics	Assista nt Profess or	29- 06- 2011	100	100	100	Regula r
Ms. F. Giftlin	BSIPG3 124L	M.Sc., M.Phil	16	Aug ust	20 10	Mathem atics	Assista nt Profess or	06- 02- 2012	100	100	100	Regula r
Ms. Johnwin Beaula N.E	AZSPJ7 082Q	M.Sc., M.Phil	15	Nov emb er	20 10	Mathem atics	Asst.Pr ofessor	23- 07 -2013	100	100	100	Regula r
Ms. Fathima Mary	ABNPF 4482F	<u>M.Sc</u> .M .Phil	18	July	20 05	mathem atics	Asst.Pr ofessor	02- 07- 2016	100	100	100	Regula r

Ms. Salini	CPTPS4 517L	M.sc,M. phill	9	Sep tem ber	20 14	MATH EMATI CS	AP	08- 01- 2018	100	100	100		Regula r
Mrs. Sukku Joshi	AQHPJ 8008L	M.A.Mp hil	11	sept emb er	19 78	English	AP	14- 09- 2009	0	100	100	08- 12- 2020	Regula r
Mr. Vinod R.S	CAD PR81 68R	MA., M.Phil.	15	July	20 09	English	Asst.Pr ofessor	11- 03- 2013	100	100	100		Regula r
Ms. Anuja Malar Y	BRLPA 4009E	MA., M.Phil.	8	July	20 13	English	Asst.Pr ofessor	23- 07- 2013	100	100	100		Regula r
Ms. Shanmugha Priya R. K.	CEGPS 0763G	M.E.	14	AP RIL	20 13	CSE	Asst.Pr ofessor	16.06. 2016	100	100	100		Regula r
Dr. Melba Kani	FBIPM7 449K	P.hd.	31	Aug ust	20 16	HRM Marketi ng	Asso.Pr ofessor	03.07. 2014	100	100	100		Regula r
Ms. Shobhana S	GHMPS 1027Q	M.E.	10	AP RIL	20 13	CSE	Asst.Pr ofessor	01- 07- 2014	100	100	100		Regula r
Ms. Ayana A	CREPA 0865L	M.E.	16	JU NE	20 14	DATA MININ G	Asst.Pr ofessor	05.04. 2016	100	100	100		Regula r
Mr. Jino Singh	AYKPJ 2688R	M.E	16	Apr il	20 14	CSE	AP	04- 07- 2016	100	100	100		Regula r
Ms. N.R. Sherly	FUNPS 0501L	M.Sc., M.Phil	19	Nov emb er	20 14	Matema tics	Asst	04.04. 2016	100	100	100		Regula r
Ms. Jelin Jangray J.S	AZIPJ1 311N	M.A., M.Phil	25	Nov emb er	20 15	English	Asst.Pr ofessor	02.04. 2016	100	100	100		Regula r

Mr. Ajay Kumar H	AYVPA 6299E	M.E.	22	April	2015	Applied Electronics	Assistant Professor	06.04.2016	100	100	100		Regular
Ms. Juliet Rose D B	FBCPB 9565D	M.E	16	JUNE	2015	VLSI DESIGN	Assistant Professor	30.11.2016	100	100	100		Regular
Ms. Analin Remena	EEMPD 2000H	M.E	23	JUNE	2015	VLSI DESIGN	Assistant Professor	06.02.2017	100	100	100		Regular
Abhiram M Nair	BHGPN 4141R	M.E	14	JUNE	2017	Manufacturing	Assistant Professor	7.3.2018	100	100	100		Regular
Justin Vijay	BGWPJ 3593G	M.E	14	JULY	2017	Manufacturing	Assistant Professor	7.3.2018	100	100	100		Regular
Bensha Davi C	APIP B7935G	M.A, M.Phil	14	Nov	2014	Physics	Assistant Professor	5.3.2020	100	0	0		Regular
Nixala Jacob	AZA PN0091P	M.Sc, Mphil	16	December	2016	English	Assistant Professor	5.3.2020	100	0	0		Regular
Mrs. Mary Prabha D	BCNPM 8461R	M.Sc., M.Phil	11	June	2008	Physics	Asst.Professor	10.08.2010	0	0	100	07-08-2019	Regular

Dr. Praveena G L	CPRPP9 851C	Ph.D	7	Feb ruar y	20 18	Physics	Asst.Pr ofessor	01- 03- 2017	0	0	100	18- 06- 2019	Regula r
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Table 8.1: Data for first year courses to calculate the FYSFR:

Year	Number of students (approved intake strength)	Number of faculty members (considering fraction load0	FVSFR	*Assessment=(5x20)/FYSFR(Limited to Max5)
2018-2019	480	32	15	5
2019-2020	480	31	15.48	5
2020-2021	420	32	13.23	5
Average		31.67	15	5

8.2. Qualification of Faculty Teaching First Year Common Courses (5)

Table 8.2: Assessment of faculty qualification for first year

Year	X	Y	RF	Assessment of faculty qualification $(5x + 3y)/RF$
2018-2019	3	29	32	3.18
2019-2020	2	29	32	3.03
2020-2021	3	29	28	3.64
Average				3.287

Average assessment: 3.287

8.3. First Year Academic Performance (10)

Table 8.3: Data for first year academic performance:

Academic Performance	2020-2021	2019-2020	2018-2019
Mean of CGPA or mean percentage of all successful students(X)	8.42	6.71	7.20
Total Number of successful students(Y)	50	74	95
Total Number of students appeared in the examination(Z)	50	74	95
Academic Performance $AP = X * (Y/Z)$ MECH	8.42	6.71	7.20

Average API [$(AP1 + AP2 + AP3)/3$] : 7.20

Assessment [$1.5 * \text{Average API}$] : 11.27

8.4. Attainment of Course Outcomes of first year courses (10)

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - Continuous Internal Assessment(CIA)
 - Semester End Examination(SEE)
 - Assignments
- **INDIRECT ASSESSMENT METHODS**
 - Course Exit survey

CO ASSESSMENT PROCESS

The CO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in fig 8.1

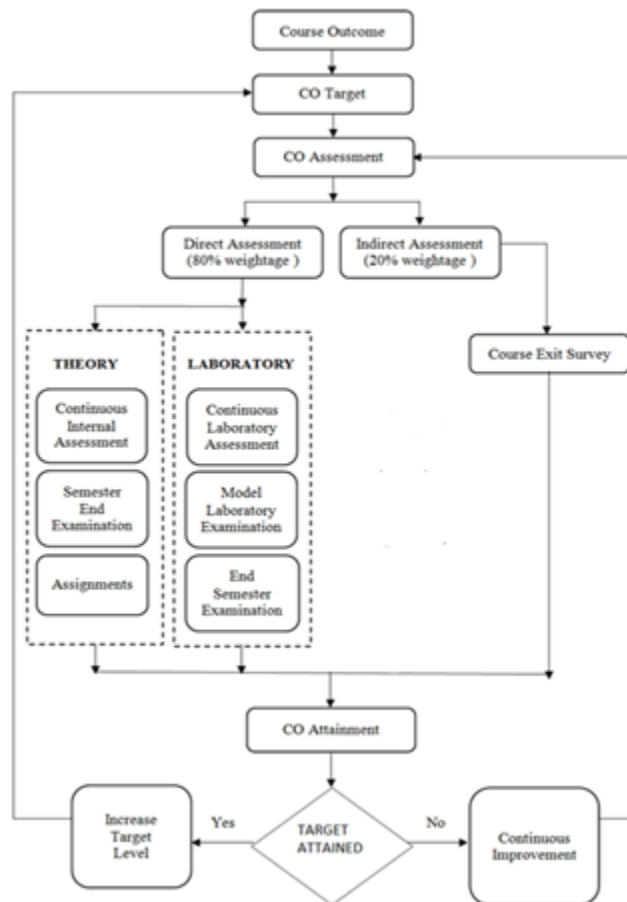


Figure 8.4.1.a. CO Assessment Process

CO ASSESSMENT METHODOLOGY AND TOOLS

Table. 8.4.1.a: CO Assessment Methodology And Tools

Assessing Year	Assessment methods		Assessment tools	Time interval	Responsible person
	Direct Assessment (80%)				
	Theory courses	Continuous Internal Assessment	Examination	Thrice in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	University
		Assignments	Rubrics	Thrice in a semester	Faculty
	Lab Courses	Continuous Laboratory Assessment	Regular Lab work assessment	Once in a week	Faculty
		Model Laboratory Examination	Examination	Once in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	Faculty
	Indirect Assessment (20%)				
	Course Exit Survey	Survey	CO based	Once in a semester	Faculty

THE QUALITY /RELEVANCE OF ASSESSMENT PROCESSES & TOOLS USED

Table 8.4.1.b: Quality /Relevance of assessment process

Assessment Tool	Description/Relevance	Evaluated By
DIRECT ASSESSMENT		
Continuous Internal Assessment (CIA)	<ul style="list-style-type: none"> Continuous Internal Assessments a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. 	Course faculty

	<ul style="list-style-type: none"> • The questions in Continuous Assessment Examination (CAE) and Model Examination (ME) are mapped against COs of respective courses. • The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department. • Question Paper scrutiny committee of the department ensures the quality of question papers and coverage of COs. • The Question Paper scrutiny committee can either accept or reject or recommend for modification of the framed question paper to ensure the quality of internal question papers. • Two Continuous Assessment Examinations and One Model Examination will be conducted for each Course. <ul style="list-style-type: none"> • CAE – I :50 marks(CO1 & CO2) • CAE – II: 50 marks (CO3 & CO4) • ME : 100 marks (CO1, CO2,CO3,CO4,CO5,C06) • Students secured less than 50% of marks in CAE 1 and having more than 3 arrears in the past University Examinations will be considered as weak students and given remedial classes using simple and smart study material. 	
Semester End Examination (SEE)	<ul style="list-style-type: none"> • The Semester End Examination is of 3-hour duration which covers the entire Syllabus of the course. • It would generally satisfy all course outcomes for the respective courses. 	University Evaluators

Assignments	<ul style="list-style-type: none"> • Assignments are given to students to provide practice exposure and knowledge enhancement of the course by the Faculty members concerned. • Three assignments will be given during the course optionally based on the student's performance analysis for the course by the concerned faculty and evaluated on the basis of rubrics. 	Course faculty
Laboratory Assessment	<ul style="list-style-type: none"> • Lab courses provide hands-on experience with course concepts and an opportunity to explore the technologies used in the domain. • Continuous Lab Assessment is based on the lab assessment rubrics which include ability of the students to conduct the prescribed practical work, interpret the result and conclusion, Record Preparation and Submission. • Laboratory model examination is conducted similar to the university Practical Examination to assess whether the course outcomes are attained 	Course Faculty
University Practical Examination	<ul style="list-style-type: none"> • The university practical examinations are of 3-hours. The evaluation is done by the External Examiner appointed by the university. • University Practical Examination assessment is to assess whether the lab course outcomes are attained. 	University Evaluators
INDIRECT ASSESSMENT		
Course exit survey	On completion of every semester, a feedback is Obtained from the students to assess the learning outcomes of the course.	Course Faculty

ATTAINMENT OF COURSE OUTCOME

CO Attainment calculation:

- In the CO attainment calculation for a course, 80% weightage is given to direct assessment and 20% weightage is given to Indirect assessment.

Table 8.4.1.c: Weightage for CO Attainment calculation

Assessment type	Percentage
Direct Assessment 1 and 2	80
Indirect assessment (Course Exit Survey)	20

- 60% of the direct assessment is contributed by Semester End Examination and 40% from Continuous Internal Assessment (CIA) for theory courses.
- The 40% contribution from CIA includes Continuous Assessment Examination I Continuous Assessment Examination II ,Model Examination and Assignments
- Assignments will be provided optionally based on the student's performance analysis for the course by the concerned faculty.

Table 8.4.1.d: Weightage distribution of Direct Assessment for CO Attainment calculation.

Assessment type	Weightage Percentage
Direct Assessment 1 (CAE1,CAE 2, ME & Assignments)	40
Direct Assessment 2 (University Examination)	60

- For Lab courses, 60% of the direct assessment is contributed by Semester End Examination (SEE) and 40% by continuous assessment process.
- The 40% contribution in lab courses by continuous assessment process include continues assessment of every experiment based on rubrics and model lab examination.
- The percentage of students in the class who scored more than threshold percentage of marks in the respective CO is the attainment.

- The threshold percentage of marks is fixed based on considering the university results for the past 3 years + 5%.
- Indirect Assessment of CO attainment is based on Course Exit Survey.

Direct Attainment

Table 8.4.1.e: Direct Attainment Calculation

$$\text{Direct Attainment} = \frac{\text{No of students scored more than threshold percentage of marks}}{\text{Total no of students}} \times 100$$

Direct Attainment Levels:

Level 1: If less than 50% of students attained the threshold percentage of marks

Level 2: If 50% to 60% of students attained the threshold percentage of marks

Level 3: If more than 60% of students attained the threshold percentage of marks

Indirect Attainment (Course Exit Survey)

Table 8.4.1.f: Indirect Attainment Calculation

$$\text{Attainment} = \frac{\sum_{i=1}^5 i * \text{no. of students gave } i \text{ option}}{5 * \text{no. of responses}}$$

8.4.2. Record the attainment of Course Outcomes of all first year courses
Academic Year (2019-2020)

Course Code	Course Name	CO		CO Attainment																	
				CO 1			CO 2			CO 3			CO 4			CO 5			CO 6		
		Ta rg et (%)	L ev el	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll	Dir ect Me tho d	Ind ire ct Me tho d	Ov era ll
C101	Comm un ica ti ve English -1	60 %	2	3	3	3	2.6	3	2.6 8	2.6	3	2.6 8	2.6	3	2.6 8	3	3	3	2.6	3	2.6 8
C102	Mathe ma tics – I	60 %	2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2
C103	Engine ering Physics	60 %	2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2	3	2.2	2.4	3	2.5 2
C104	Engine ering Chemis try	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C105	Problem solving and Python programming	60 %	2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2	2.4	3	2.5 2
C106	Engineering Graphics	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C107	Problem solving and Python programming laboratory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C108	Physics and Chemistry Laboratory -I	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C109	Technical English – II	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C110	Mathe matics – II	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C111	Materi al Scienc e	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C112	Basic Electri c, Electro nics Instru mentati on Engine ering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C113	Enviro nmenta l Scienc e and Engine ering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C114	Engine ering Mecha nics	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C115	Engineering Practices Laboratory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C116	Basic Electric, Electronic Instrumentation Engineering Laboratory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C117	Physics for Civil Engineering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C118	Basic Electrical and Instrumentation Engineering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C119	Computer Aided Drawing Lab	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C120	Physics for Information Science	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C121	Basic Electrical, Electronics and Measurement Engineering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C122	Programming in C	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C123	C Programming Laboratory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C124	Physics for Electro	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

	Electronics Engineering																				
C125	Circuit Analysis	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C126	Electronic devices	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C127	Circuit and Devices Laboratory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C128	Basic Civil and Mechanical Engineering	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C129	Circuit theory	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C130	Electric circuits	60 %	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

	laborat ory																				
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8.5. Attainment of Program Outcomes from first year courses

8.5.1. Indicate results of evaluation of each relevant PO and/or PSO, if applicable

POs Attainment

Course code	Course	Course Title	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
C101	HS8151	Communicative English English-1	0	0	0	0	0	0	0	0	0	2.6 2	0	0
C102	MA8151 Engineering Mathematics-I	Mathematics – I	2.5 2	1.6 8	0.8 4	0	0	0	0	0	0	0	0	0
C103	PH8151	Engineering Physics	2.0 5	1.5	0	0	0	0	0	0	0	0	0	0
C104	CY8151	Engineering Chemistry	2	1.8 3	1.6 7	1.3 3	0	0	0	0	0	0	0	0
C105	GE8151	Problem solving and Python programming	2.2 4	1.8 2	1.1 2	2.1 9	0	0	0	0	0	0	0	0
C106	GE8152	Engineering Graphics	2.5 3	1.6 4	0.8 9	0	0	0	0	0	0	1.9 9	0	0
C107	GE8161	Problem solving and Python programming laboratory	3	2.2	1.4	0	2.0 8	0	0	0	0	0	0	0
C108	BS8161	Physics and Chemistry Laboratory -I	2.8	1.8	1.3 3	0	0	0	0	0	0	0	0	0

C109	HS8251	Technical English – II	0	0	0	0	0	0	0	0	0	2.4 1	0	0
C110	MA8251 Engineering Mathematics-II	Mathematics – II	3	2	1	0	0	0	0	0	0	0	0	0
C111	PH8251	Material Science	2.9 5	2.3	2.7 5	0	0	0	0	0	0	0	0	0
C112	BE8253	Basic Electric, Electronoc Instrumentation Engineering	2.3 6	2.4	2.8	2.0 5	1.9 7	0	0	0	0	0	0	0
C113	GE8291	Environmental Science and Engineering	2.4 6	2.4	1.5 7	1.9 3	0	0	1.8	0	0	0	0	0
C114	GE8292	Engineering Mechanics	3	2.5	1.9	0	0	0	0	0	0	0	0	0
C115	GE8261	Engineering Practice Laboratory	2.2	0	0	0	0	0	0	0	2	0	0	0
C116	BE8261	Basic Electric, Electronoc Instrumentation Engineering Laboratory	3	2	1	2.0 1	0	0	0	0	1	0	0	0
C117	PH8201	Physics for Civil Engineering	2.7	1.7 2	0	0	0	0	0	0	0	0	0	0
C118	BE8254	Basic Electronics and Electrical Engineering	2.5	1.6 7	0	0	0	0	0	0	0	0	0	0

C119	CE 8211	Computer Aided Drawing Lab	2	0	0	0	1.8 5	0	0	0	0	0	0	0
C120	PH8252	Physics for Information Science	2	2	0	0	0	0	0	0	0	0	0	0
C121	BE8255	Baisic Electrical, Electronics and Measureme nt Engineering	3	2	1.7 5	2	0	0	0	0	0	0	0	0
C122	CS8251	Programmi ng in C	2.6 7	2.1 7	2.7 6	2.0 1	0	0	0	0	0	0	0	0
C123	CS8261	Programmi ng in C Lab	3	1.9	1.6	2.1	1.9 7	1.5	1.7 55	0	1.9 33	1	0	0
C124	PH8253	Physics for Electronic Engineering	1.6 8	2	0	0	0	0	0	0	0	0	0	0
C125	EC8251	Circuit Analysis	3	2.1 7	1.1 7	2.0 5	0	0	0	0	0	0	0	0
C126	EC8252	Electronic devices	2.3	2	1.8	2	0	0	0	0	0	0	0	0
C127	EC8261	Circuit and Devices Lab	3	3	1.6 74	2	0	0	0	0	0	0	0	0
C128	BE8252	Basic Civil and Mechanical Engineering	2.8 33	2.3	2.7	0	0	0	0	0	0	0	0	0
C129	EE8251	Circuit theory	3	2.2	1.4	2	0	0	0	0	0	0	0	0
C130	EE8261	Electric circuit lab	3	1.9 2	2.8	2.1 6	2.0 7	0	1	0	2	1	0	0
		Average	2.6 0	2.0 4	1.7 1	1.9 9	1.9 9	1.5 0	1.5 2	0.0 0	1.7 3	1.8 0	0.0 0	0.0 0

PO Attainment Level

Course	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Direct Attainment	2.60	2.04	1.71	1.99	1.99	1.50	1.52	0.00	1.73	1.80	0.00	0.00
CO Attainment	2.60	2.04	1.71	1.99	1.99	1.50	1.52	0.00	1.73	1.80	0.00	0.00

8.5.2. Actions taken based on the results of evaluation of relevant POs (5)

POs & PSOs Attainment Levels and Actions for improvement – CAY (2019-2020)

POs	Target level	Attainment level	Observations
PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2	2.60	<p>Students are up to the expected level to apply their basic mathematics, science and Engineering knowledge in various Mechanical Engineering courses. The Observations are</p> <ul style="list-style-type: none"> Students were able to solve basic engineering problems using basic science and mathematics principles through the experiments given.
The above actions are continued.			
PO2. Identify, formulate, review research literature, and analyze complex engineering problems researching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.00	2.04	<p>Students were not up to the expected level to analyze and develop solutions to complex Engineering problems. The Observations are</p> <ul style="list-style-type: none"> Students were not able to effectively analyze the complex problems in some courses through the tutorials given.

The above actions are continued, in order to achieve the target the following action is taken

Action 1: Seminar on analysis of engineering problems are conducted.

PO3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO3	2	1.71	<p>Designing, implementation and evaluation skills of students with realistic constraints are not up to the expected level. The Observations are</p> <ul style="list-style-type: none"> Students were not able to design effectively solutions for complex engineering problems through the workshop given.
<p>The above actions are continued, in order to achieve the target the following action is taken</p> <p>Action 1: Seminar given on e-waste management is given.</p>			
PO4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	2	1.99	<p>Students are able use their research based knowledge to analyze societal challenges and to provide valuable conclusions. The Observations are</p> <ul style="list-style-type: none"> The interpretation and analysis software introduced in the lab classes was useful. The idea scouting competitions conducted for students were useful. .
<p>The above actions are continued, in order to achieve target the following action is taken</p> <p>Action 1: Workshop on data analysis using excel is to be conducted</p>			
PO5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO5	2.00	1.99	<p>Students are up to the expected level to use modern tools and techniques. The Observations are</p> <ul style="list-style-type: none"> Workshops on software tools for engineers are conducted by experts are useful. The appreciable involvement in learning modern tools.
<p>The above actions are continued, in order to achieve the enhanced target the following actions are taken</p> <p>Action 1: Seminar on limitations of software tools in Engineering Applications is to be conducted.</p>			
PO6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			

PO6	2	1.5	<p>Students are not up to the expected level by gaining knowledge on societal, health, safety, legal and cultural issues. The Observations are</p> <ul style="list-style-type: none"> • Special technical session arranged by resource persons from industry was not up to the level.
<p>The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Seminars on social responsibilities of engineers is to be conducted.</p>			
<p>PO7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.</p>			
PO7	2	1.52	<p>Students are not up to the expected level to understand that the current technological development and its impact on sustainability. The Observations are</p> <ul style="list-style-type: none"> • Seminars conducted on conservation of environment are were not up to the level.
<p>The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Students are exposed to the working principles of the biogas plant.</p>			
<p>PO8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.</p>			
PO8	-	-	
-			
<p>PO9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.</p>			
PO9	2	1.73	<p>Students are not up to the expected level to perform effectively as an individual and also as a member of a team in order to have a good career and to participate in societal events. The Observations are</p> <ul style="list-style-type: none"> • Project discussions conducted was not up to the level.
<p>The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Students are encouraged to work in teams for project expo.</p>			

PO10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO10	2	1.804	<ul style="list-style-type: none"> Group discussions conducted are not up to level.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Seminar hours are included in the timetable.			
PO11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	2	-	-
-			
PO12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	2	-	-

CRITERION - 9	STUDENT SUPPORT SYSTEMS	50
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9.1 Mentoring system to help at individual level (5)

A. Details of the mentoring system that has been developed for the students for various purpose and also state the efficacy of such system

Mentoring is provided for total development of the students. Faculty members will be the tutors and mentors for the students, who will help them to overcome their academic and personal difficulties. A balanced and effective mentoring is in place, maintaining a healthy relationship between faculty members and students. Around 18 students are assigned to a mentor. Mentoring is planned based on the concept “**Know about Mentee**” which emphasizes the following aspects:

- Students will be provided with an opportunity to disclose themselves
- Mentor well asses the mentee individually
- Behavioral study will be made by the mentor
- Desirable characteristics of the mentee are highly appreciated.
- Negatives were pointed out in a better way individually without hurting his ego
- Make him responsible for all his behavior.
- Maintain mentor-mentee cordial relationship.

After knowing the mentee, mentoring is planned by the mentor for the following aspects:

- Improve Academic performance.
- Develop a Research Orientation
- Guidance for Professional Career, Higher Studies & Skill Development
- Resolve Personal Issues: Behavioral; psychological
- Encourage Spirit of Innovation by motivating and training students to participate in Contests, Conferences, Projects and Internships
- Motivate to pursue Extra-curricular and Social activities
- Encourage students to participate in Cultural activities, Arts and Sports.
- Develop Personality and Character
- Foster Good Values, Healthy living and Discipline

Table 9.1(a): Types of Mentoring System

Sl. No.	Types of mentoring system	Functions
1	Professional Guidance	<p>Skill Enhancement for better employability</p> <ul style="list-style-type: none"> ● Students are encouraged to enroll themselves as members of various professional bodies and also to attend various inter-institute, state, national and international competitions to increase their exposure to the current professional practices in the engineering sector. <p>Nurturing innovative Ideas:</p> <ul style="list-style-type: none"> ● The college also offers an incubation hub in IEDC for the startups, where they can set up a startup company with their idea.
2	Academic Guidance	<p>Academic Counseling</p> <ul style="list-style-type: none"> ● Identify students with low attendance and ensure that they improve their attendance. <p>Support to the poor performers</p> <ul style="list-style-type: none"> ● Remedial classes are conducted for each subject after the CAE1&2 for weak students.

3	Career Advancement	Training programs: <ul style="list-style-type: none"> ▪ Students are encouraged to attend specialized training programs through career guidance cell to enhance their career opportunities. Training & Placement Cell guidance: <ul style="list-style-type: none"> ▪ Students are directed to attend specialized training by experts from different area prior to their placement.
4	Laboratory Specific	Experiment support: <ul style="list-style-type: none"> ▪ Mentor in consultation with faculty, arrange extra classes in laboratories for weak students.
5	Holistic Development	Holistic Development of the student <ul style="list-style-type: none"> ● Encourage and support students towards all round development through participation in literary, cultural and sports activities.

Table 9.1.b: Summary of mentoring system developed

Parameters	Description
Type of mentoring system	Professional guidance / career advancement / course work specific / laboratory specific / total development /personal Development
Number of faculty Mentors	80
Average number of students per mentor/	18
Frequency of meeting	Thrice in a semester, <i>in some cases, as and when needed</i>
Professional Counselor	One dedicated counselor for the college.

B. Efficacy of mentoring/counseling system:

The mentoring/counseling system developed by the college has proved to be effective as defined by different parameters:

- Students who were at the risk of dropout, have been saved by the mentoring and counseling system, in the last three years.
- Slow learners at the entry level are elevated to moderate and fast learners by the continuous monitoring of the mentors.
- Participation of students in technical and non technical events are improved by the motivation of mentors

Table 9.1.c: Efficiency of mentoring

Sl. No .	Types of mentoring system	Number of beneficiaries			
		2016-17	2017-18	2018-19	2019-20
1	Professional Guidance	312	340	404	366
2	Academic Guidance	131	196	203	232
3	Career Advancement	54	65	74	13
4	Laboratory Specific	24	21	16	15
5	Holistic Development	63	102	112	102

9.2 Feedback analysis and reward / corrective measures taken, if any (10)

A. Methodology of feedback process

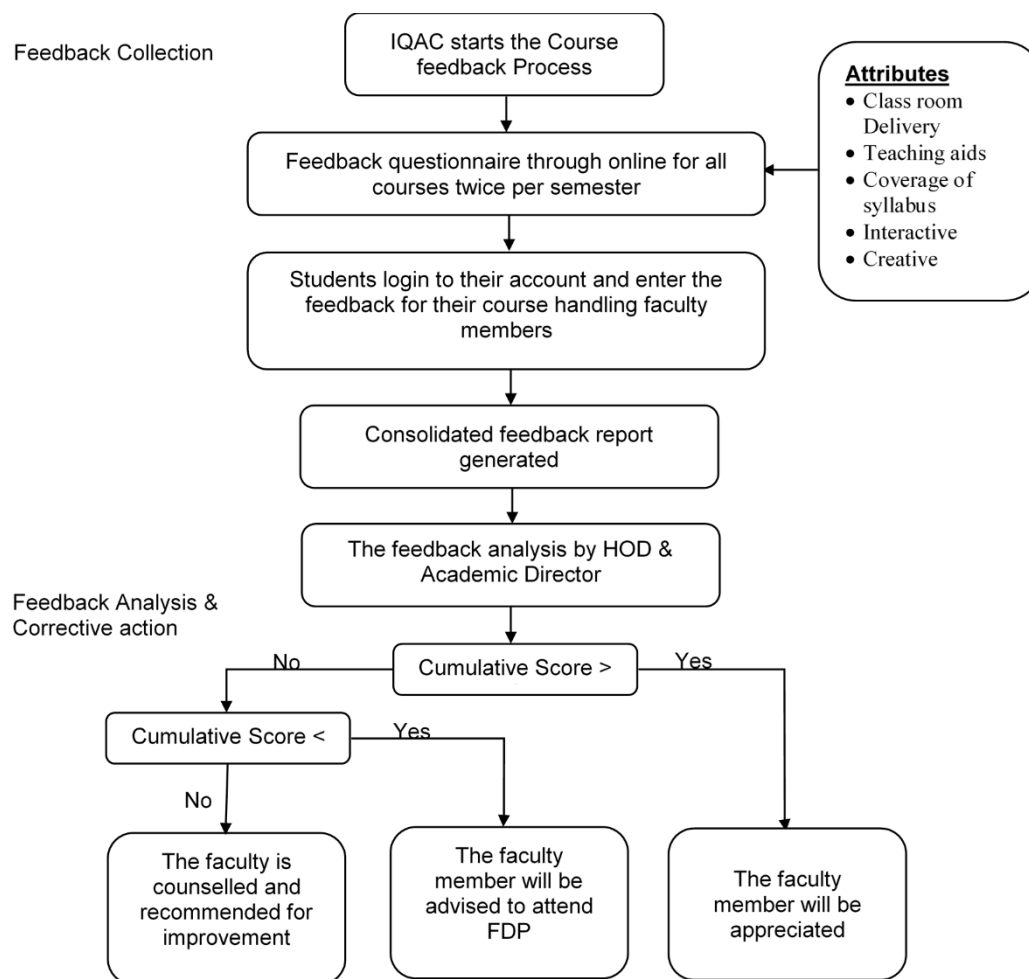


Fig.9.2.a: Flowchart representing course feedback process

Feedback collected for all courses (Yes/No)	Yes
Average Percentage of students participating	90%

Feedback Collection Process

- A feedback questionnaire is prepared by IQAC. The students give feedback for their subject handling faculty members through online mode.
- The frequency of feedback is twice per semester (After CAE I & CAE II).
- The feedback is based on an average scale of 10 for the attributes like classroom delivery, teaching aids, coverage of syllabus, Interactive and creative.
- After the recommendations of IQAC, threshold value will be finalized. The normal value setup at present is 10- Excellent, 8- Very Good, 6-Good, 5- Satisfactory, 3- Below average.

- The consolidated feedback is generated by the Head of the Department and submitted to IQAC.
- A consolidated department report is forwarded to Academic Director.

Feedback Analysis Process

- The report is analyzed by the Academic Director along with the HOD.
- The faculty members who score 9 & 10 are appreciated.
- The faculty members will be counseled for the feedback attributes for which their feedback value is from 6 to 8. An opportunity is given to these teachers to rectify their weakness if any.
- The faculty members who score less than 6 are advised to attend FDP and incorporate other corrective measures.
- All the consolidated feedback after being analyzed by the Academic Director and HoD, the corrective measures are proposed by the HoD and approved by the Academic Director.
- The report will be forwarded to the Principal for his kind perusal.
- The feedback analysis will have an impact on their performance appraisal and promotions.

B. Record of the corrective measures taken

Based on report, the areas where the teacher is good is appreciated. The areas in which a teacher needs improvement and attention is informed and proper counseling is given to overcome the deficiency and to improve his/her performance. The faculties lacking in specific area are addressed and directed to attend faculty development programs in order to improve their skill set in teaching methodology.


Course Feedback Report - Mech - OIM552 - Lean Manufacturing


Name of the Course Instructor	: GIGIN DURAI C	Course Code/title	: OIM552 / Lean Manufacturing
Name of the Department	: Mech	Programme	: UG
Year	: Third Year	Academic Year	: 2019 - 2020
Semester	: Fifth Semester	Section	: B
Total Students	: 63	Total Students Participated	: 61
Students % (Participated)	: 96.83 %	Feedback	: Feedback - I

SINO	Parameters	Score 10 Max
1	Availability of faculty 2 minutes prior to the commencement of each class	8.05
2	Audibility of faculty's Voice and Teachers control over class	7.74
3	Capability of communicating in English	7.79
4	Initiatives taken for slow learners through remedial classes and advanced learners through training of competitive examination/ placement questions.	7.61
5	Coverage of syllabus and additional contents within given time.	7.92
6	Providing inspiration and positive energy to students.	7.85
7	Applicability/relevance to real life situations and integration of content with other courses.	7.84
8	Reference of other books, journals, magazines and NPTEL videos in class.	7.67
9	Clarifying doubts inside and outside classroom.	7.8
10	Ability to use digital technology devices in classroom.	7.62
11	Involving students during lecture through interactions.	7.89
12	Addition of relevant topics required for Industries (Content Beyond Syllabus) and sharing current technologies and updates in class.	7.93
13	Ability to design quiz/test/mini project/assignments/self learning content /industrial visits to evaluate students understanding.	7.97
Average Marks		7.82

Corrective action planned


1. Instructed to use more PPT's & other digital Technology
- 2.
- 3.

Approved By 

Date 24/8/19 **Proposed by : HOD**  **Academic Director**

Verification of Corrective action

1. Verified his PPT usage in classroom
- 2.
- 3.

Verified By 

Date 5/9/19 **HOD**

Fig.9.2.b: Sample course feedback report

Course Feedback Consolidated Report - Mech - Third Year -					
Department	Mech	Programme	UG		
Year	Third Year	Academic Year	2019 - 2020		
Sl.No.	Name	Section	Course	Feedback	Marks
1	John Mathias Raj M	B	Thermal Engineering Lab	Feedback - I	7.87
2	ARUN S	B	Thermal Engineering - II	Feedback - I	7.67
3	GUDIMAN PITHALIL N S	B	Dynamics of Machines	Feedback - I	7.76
4	John Mathias Raj M	B	Lean Manufacturing	Feedback - I	7.81
5	GUDIN DURAI C	B	Lean Manufacturing	Feedback - I	7.61
6	Beach Selvan S.I	B	Design of Machine Elements	Feedback - I	7.91
7	Arto Paulin Marito P	B	Metrolgy and Measurements Lab	Feedback - I	7.94
8	Beach Selvan S.I	B	Kinematics and Dynamics Lab	Feedback - I	7.86
9	Arto Paulin Marito P	B	Metrolgy and Measurements	Feedback - I	8.26
10	Leo Bright Singh R	B	Lean Manufacturing	Feedback - I	8.71
11	ARUN S	B	Thermal Engineering - II	Feedback - II	8.78
12	Beach Selvan S.I	B	Design of Machine Elements	Feedback - II	8.6
13	Beach Selvan S.I	B	Design of Machine Elements	Feedback - I	8.61
14	ARUN S	B	Thermal Engineering Lab	Feedback - I	8.63
15	Beach Selvan S.I	B	Design of Machine Elements	Feedback - II	8.66
16	Arto Paulin Marito P	B	Metrolgy and Measurements	Feedback - II	8.75
17	John Mathias Raj M	B	Thermal Engineering Lab	Feedback - II	8.77
18	Beach Selvan S.I	B	Kinematics and Dynamics Lab	Feedback - II	8.78
19	GUDIMAN PITHALIL N S	B	Dynamics of Machines	Feedback - II	8.79
20	Arto Paulin Marito P	B	Metrolgy and Measurements Lab	Feedback - II	8.78
21	John Mathias Raj M	B	Lean Manufacturing	Feedback - II	8.76
22	GUDIN DURAI C	B	Lean Manufacturing	Feedback - II	8.76
23	ARUN S	B	Thermal Engineering - II	Feedback - I	8.71
24	GUDIMAN PITHALIL N S	B	Kinematics and Dynamics Lab	Feedback - I	8.71
25	Leo Bright Singh R	B	Lean Manufacturing	Feedback - II	8.72
26	GUDIMAN PITHALIL N S	B	Kinematics and Dynamics Lab	Feedback - II	8.74
27	ARUN S	B	Thermal Engineering Lab	Feedback - II	8.61
28	ARUN S	B	Thermal Engineering - II	Feedback - II	8.64
29	Arto Paulin Marito P	B	Metrolgy and Measurements	Feedback - II	8.64
30	GUDIMAN PITHALIL N S	B	Dynamics of Machines	Feedback - II	8.60
31	Leo Bright Singh R	B	Metrolgy and Measurements Lab	Feedback - I	8.68
32	Arto Paulin Marito P	B	Metrolgy and Measurements	Feedback - II	8.67
33	Leo Bright Singh R	B	Metrolgy and Measurements	Feedback - II	8.8

Director's Comment

1. Feedback in the list from 1-8 are secured below it and are asked to undergo some correction measure they can. Feedback Report

2. Feedback in the list from 9-36 are appreciated and maintain the same continuously.

Fig.9.3 Sample consolidated feedback report

Other modes of feedback system

- Feedback discussion in the class committee meeting, which comprises of Chairperson, course instructors and students of different categories in the class. Students are invited to express their view on courses and other grievances to improve teaching learning process.
- Oral feedback obtained from students by mentors, course instructors, HoDs, Academic Director, Head of the Institution and management are given due importance.
- Feedback from alumni is collected during the alumni meet conducted every year.
- Feedback reports from parents are collected during Parent Teacher
- Feedback collected from suggestion box are given due importance

9.3 Feedback on facilities (5)

A standard procedure for feedback on facilities is taken up in the department. Feedback is collected from the students on the facilities available in the college such as class room infrastructure, canteen, library, sports, medical facility, etc. The feedback is analyzed and the necessary corrective measures are implemented after discussions with the management.

Following is the process of feedback on facilities.

- 1) Feedback collection process
- 2) Feedback analysis
- 3) Corrective measures

1. Feedback collection process:

Table 9.3.a: Details of feedback collection process

Items	Description
Feedback collected on all facilities provided by the college.	YES
Feedback collection process	Online
Feedback receiver	Head of the Department
Frequency of feedback collection	Once in an academic year
Metrics used for calculation	Excellent Satisfied Not Satisfied

2. Feedback analysis

The feedback given by the students is generated by the HoD and consolidated by the IQAC. The consolidated report is handed over to the Principal. The Principal discuss about the consolidated report with the management and come out with necessary actions.

3. Corrective Measures

Based on the feedback from students the old water filter has been replaced by a new water filter. Canteen has been renovated with more space, seating facility and updated food menu. Parking area has been extended Sports facility has been improved. Equipments have been purchased for gym.



Mar Ephraem

College of Engineering and Technology

Facility Feedback

Student Name :

Semester/Year:

Department. :

1. Are you satisfied with the size, Lighting and Ventilation size of the class room?	Excellent
2. Are you satisfied with the ambience, quality of food and food menu provided in the canteen?	Satisfied
3. Are you satisfied with the cleanliness of washroom at the time?	Excellent
4. Are you satisfied with the quality of drinking water?	Not Satisfied
5. Are you satisfied with the support and assistance provided in the office?	Excellent
6. Are you satisfied with the convenience provided in the exam cell?	Satisfied
7. Are you satisfied with the reprographic facilities in the campus?	Excellent
8. Are you satisfied with the facilities available in the library?	Satisfied
9. Are you satisfied with the power back up facilities available in the campus?	Excellent
10. Are you satisfied with the facilities available in the store?	Satisfied
11. Are you satisfied with the Medical facilities available in the campus?	Excellent
12. Are you satisfied with the facilities available for Sports?	Excellent
13. Are you satisfied with the parking facility provided inside the campus?	Satisfied
14. Are you satisfied with the facility available in the college gym?	Excellent



Fig.9.3 Sample feedback on Facilities

9.4 Self-Learning (5)

The academic system in the Institution facilitates students to learn beyond the syllabus and curriculum. Our institution offers courses like project based laboratory, industry field training, project work, value added course, technical presentation etc. The components of self-learning are evaluated in these areas.

A. Scope for Self Learning.

Self-learning makes the students highly motivated, persistent, independent, self-disciplined, self-confident, goal oriented. They gain practical knowledge and update the recent technology development to do their innovative project work by doing a state of art literature survey. The Institution provides many self-learning facilities like digital library, technical magazines, E books, NPTEL, Wi-Fi connectivity etc.

- Students are encouraged to attend seminars and workshops to learn about recent trends and Technologies.
- Students are encouraged to exhibit their talents by participating in paper presentation and other technical events conducted by various reputed Institutions.
- During projects, students are encouraged to identify problems based on literature review which develop their self-learning capabilities.
- Students are encouraged to take MOOC courses from platforms such as NPTEL.

B. The institution needs to specify the facilities; materials for learning beyond syllabus, Webinars, Podcast, MOOC s etc. and demonstrate its effective utilization

Table 9.4.a: Detailed list of self learning facilities

Sl. No.	Self Learning Process	Description
1	Central Library	<ul style="list-style-type: none"> • The college library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. • College library equips students with learning skills and develop the knowledge. • The library is equipped with sufficient journals and reference books
2	Digital Library	<ul style="list-style-type: none"> • Availability of NPTEL videos • Sufficient systems with multimedia facilities. • Institutional membership of DELNET, a library networking database. • Internet facility
3	Department Library	<ul style="list-style-type: none"> • The department is facilitated with books and different sample project report models

4	Web based learning	<ul style="list-style-type: none"> • The internet is an open information system in which various sources of information, media and materials such as texts, images, video sequences can be linked together in diverse ways to form so-called self-learning environment. • The college is equipped with centralized Wi-Fi system. so that the students can access internet by registering the laptop or mobile by registering to the network administrator • Internet offers new possibilities to structure, represent, adopt and integrate various learning content and materials. • E-material links are provided in the website for easy access to students
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Utilization and its effectiveness:

Table 9.4.b: Library Utilization Report for the Academic year 2019-2020

Reading (Regular/Library Hour)

Sl. No .	Description	Library Hour Per Week Per Student (9 AM to 4 PM)	Beneficiary	No. of Beneficiaries	Beneficiaries in %
1.	Text Book	2	Students and Staff	1052	76
2.	Reference Book	2	Students and Staff	391	28
3.	Journals (Printed Version)	2	Students and Staff	943	68
4.	E-Journals	2	Students and Staff	57	4
5.	Magazines and Newspapers	1	Students and Staff	1057	77
6.	Competitive Exam Books	2	Students and Staff	110	8
7.	GATE Books	2	Students and Staff	126	9
8.	NPTEL Videos	2	Students and Staff	97	7
9.	Question Bank	1	Students and Staff	70	5
10.	DELNET Database	1	Students and Staff	57	4

Reading (Evening Hour)

Sl. No .	Description	Utilization Hours Per day (4 PM to 7 PM)	Beneficiary	No. of Beneficiaries	Beneficiaries in %
1.	Text Book	2	Students	235	42
2.	Reference Book	2	Students	52	9
3.	Journals (Printed Version)	2	Students and Staff	50	9
4.	E-Journals	2	Students and Staff	18	3
5.	Magazines and Newspapers	3	Students	287	52
6.	Competitive Exam Books	2	Students	35	6
7.	GATE Books	2	Students	15	2
8.	NPTEL Videos	1	Students and Staff	18	3
9.	Question Bank	1	Students	13	2
10.	DELNET Database	1	Students	18	3

9.5 Career guidance, Training, Placement(10)

A. Availability of career guidance facilities:

The **Career Guidance Cell** aims at providing the best opportunities enabling every student to realize his/her dream. This team is committed to the task of securing final placements and summer internships for every student on campus. It helps the students as mentioned below:

- Trainings and counseling were provided for the students to acquire knowledge and skills necessary to make lifelong career decisions.
- **Provides latest information on training & employment opportunities**, bringing students and potential employers together and arranging for placement
- To conduct Seminar, Special lectures on Career Guidance and for pursuing higher studies.
- To get placed in national and multinational companies through ON/OFF campus recruitment.
- Alumni are made to engage the students to teach various skills.

Various types and levels of placement training programs are organized like

- Group Discussions,
- Mock Interviews,
- Personality Development,
- Resume Preparation,
- Model Campus Interview Tests,
- Training for Communication,
- Training for Group Works,

- Awareness about Competitive Exams,
- Leadership Qualities,
- Team Effectiveness
- Sharing of Experience By Eminent Personalities and
- Aptitude Test

B. Counselling for higher studies

Awareness on higher studies in India and abroad is provided by eminent personalities through seminars. Training programs and workshops are given to students regarding CAT, MAT, TANCET, GATE, IELTS and TOEFL

C. Pre placement Training

- Aptitude Development training sessions are conducted for all program by experts.
- Soft skills for all students are conducted by the seasoned trainers experienced in corporate orientation.
- Technical and domain related sessions are conducted for all the students by subject experts from industries.

Table 9.5.a: Detailed list of pre placement trainings

Sl. No.	Type of Training	Trainer/Company
1.	Company Specific Training	Mr.D.Vignesh
2.	Training on Staad Pro	CADD centre team
3.	Pre placement Training	SMEC team
4.	Workshop on CNC	Internal Trainers
5.	Training on CATIA	CADD Centre Team

D. Placement process and support for students

The students are provided with necessary support to attain placement.

- The database of the students on their academic performance is collected.
- Placement Officer orients the students on placement opportunities and preparations required for placements.
- The companies are invited for placement by the placement Cell.
- The database is screened depending upon the eligibility criteria specified by the companies
- The students are given the special training in accordance with the company by external expert and alumni if they are working in the same company which is invited for recruitment.
- The eligible students are permitted to attend the interview and the company will carry over the placement process with the support of Placement Cell.

Table 9.5.b: List of recruiters

Sl. No.	Company
1.	ESSEL PROPACK, Poland
2.	Environ Construction , Singapore
3.	TCS
4.	CTS
5.	Infosys
6.	UST Global
7.	HCL Technologies
8.	TATA ELXSI
9.	Quest
10.	STUP CONSULTANTS
11.	Renault Nissan
12.	INNOVATE Designers & Builders
13.	SAFA Constructions
14.	SMEC
15.	PARASCADD
16.	ONEGENE
17.	CADD Centre
18.	CADOpt Technologies
19.	SS TECHNOVATION
20.	Neel Auto Private Limited
21.	Build – Tech Engineers
22.	TVS Sundram Fasteners Limited

Efficacy of career Guidance, Training, Placement**Table 9.5.c: Impact of career guidance, training, placement and certification**

Sl. No.	Academic year	Total no. of students	No. of students placed	No. of students admitted to higher studies	No. of students as entrepreneur
1	2020-21	328	47	14	2
2	2019-20	361	279	14	3
3	2018-19	361	279	14	3
4	2017-18	377	292	23	3

9.5 Entrepreneurship Cell

Entrepreneurship development cell is formed in the institution to build a world class entrepreneurship hub to cater the needs of students with innovative ideas of social relevance and thereby introducing an entrepreneurship culture in the campus.

Mission

To develop an entrepreneurial ecosystem that enables the students and the members of the faculty to bring out their innovative and potential ideas and develop those creative ideas into innovative products to uplift the economic status of the society.

Objectives:

- To design and develop innovative products of social relevance.
- To create entrepreneurial culture among faculty members, students and alumni.
- To support other neighboring institutions to mould and effectively carry out entrepreneurial activities in their campuses.
- To focus more on innovation driven entrepreneurship from student projects.
- To encourage more women to become entrepreneurs.
- To promote start-up initiatives from faculty members and students.

Facilities

- Mentors from different industries to support new business idea
- Meeting with successful Entrepreneurs
- Pre incubation center with advanced facilities for product development.

NewGen IEDC Marephraem

- NewGen IEDC aims to inculcate the spirit of innovation and entrepreneurship amongst the young students, encourage and support start-up creation through guidance, mentorship & support. NewGen IEDCs is established in 2019 where students are encouraged to take up innovative projects with the possibility of commercialization.

Sl. No	Name of the Project	Sponsoring Agency	Amount	Year of grant	Status
1	NewGen IEDC	DST/NSTEDB	2.87 corers	2019	Ongoing

A. Entrepreneurship initiatives

2018-2019

Sl.No	Name of the Event	Date	No.of Beneficiaries
1	Entrepreneurship Awareness camp (EAC)	9.11.2018-10.11.2018	81
2	Entrepreneurship Awareness Camp (EAC)	6.09.2018-08.09.2018	87
3.	Entrepreneurship Awareness camp (EAC)	5.12.2018-07.12.2018	76
4	Challenge identification Competition	February 2018	224
5	Idea scouting	March 2018	48

2019-2020

Sl. No	Name of the Event	Date	No.of Beneficiaries
1	Orientation Program on Entrepreneurship	09.02.2019	63
2	One day workshop on Communication and Leadership Training	09.03.2019	58
3.	Industry Institutional Interactive Program	29.12.2018	Members of the faculty
4.	Challenge Identification Competition	22.01.2019	224
5.	Seminar on How to Identify a Great Business Idea	19.12.2018	72
6.	Robotics Automation Competition	19.04.2019	23
7.	Idea Pitching Contest	26.04.2019	71
8.	Science and Technical Exhibition	16.03.2019 & 17.03.2019	All Students
9.	Entrepreneurship Awareness camp (EAC)	6.09.2018-08.09.2018	87
10.	Entrepreneurship Awareness Camp (EAC)	9 ^h , 10 th and 12 th 11. 2018	81
11.	Entrepreneurship Awareness camp (EAC)	5.12.2018-07.12.2018	76
12	Start up visit to villages	08.10.2019	63

13	minar on Technology commercialization and business opportunities in different sectors	04.04.2019	55
14	Seminar on IPR - Group 2	11 .02. 2019	52
15	Business plan competitions	11.08.2019	13 team Members (Each team 6 students)

2020-2021



Sl.No	Name of the Event	Date	No.of Beneficiaries
1	A Seminar on Entrepreneurial Ecosystem	11/01/2020	48
2	Entrepreneurship Awareness camp (EAC) -2	10/02/2020 to 12/10/2020	76
3	Entrepreneurship Awareness camp (EAC) -3	17/02/2020 to 12/10/2020	88
4	Seminar on Technology Commercialization and Business Opportunities in different Sectors	04/02/2020	53
5	Workshop on Effective Market Research	25/02/2020	59
6	Challenge Identification Competition	3/03/2020	96
7	Idea Pitching	12/03/2020	62
8	Workshop on how to prepare the Business Plan	17/03/2020	73
9	Start-up visit in villages -1	11/08/2020	11
10	Start-up visit in villages -1	02/09/2020	6
11	Webinar on Rethink Research	08/06/2020	67
12	Outreach Webinar series on Entrepreneurship	10/08/21 to 14/08/21	456
13	Webinar on identifying intellectual property in projects & provisional patent filing.	25/09/2020	36




B. Data on students benefitted




Winners Challenge Identification Competition 2019-2020




Sl. No	Name of the student	Title of the Challenge	Department	Prize
1	Nikhil John	Recycling of paper wastes in the college.	II Mech	1 st prize Rs. 10000
2	Jose Vivek Wilfred	Bionic arm for handless people.	IV Mech	2 nd Prize Rs. 5000

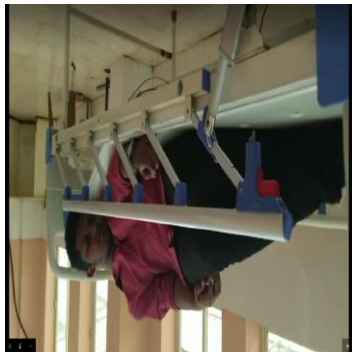

NewGen IEDC Student Projects 2019-2020



Sr. No	Team/Project Description	Interventions made	Current status
1	Student Team: Ms. Jeba. J Ms. Julia Bergio. K Mr. Abinesh. E Mr. Alphin. A Mentor Name: Mr. Jackson Thanga Roy Assistant Professor / Mech Project Name: Portable Smart RubberHarvesting Machine	*Weight Reduction *Portable Setup *User Friendly *Sensor for detecting the latex layer of the tree *Rack and Pinion mechanism	Prototype completed 
2	Student Team: Mr.AshickNewbin. A.C Mr.Rahul.R.G Mr.Rithick.R.Gopal Mentor Name:	*Self Priming hydroponics manufacturing for cattle feed	*Product Completed *Patent filed 

	<p>Mr. John Thangam Assistant Professor / Civil</p> <p>Project Name: Self-Priming Automated Fodder System</p>		
3	<p>StudentsName : Ms. Jenila Jacob Ms. Reshma Ms. Blessiya Mentor Name: Mr. LalinL.Laudis Assist Professor / ECE</p> <p>Project Name : Textacles</p>	<p>*Developed a module to recognize text and convert it into audio</p>	<p>Prototype completed “International Journal of engineering research and technology” (Paper Communicated)</p> 
4	<p>Students Team Mr.DeukerDikkinson Mr.Abish Raj .A Mr.Rino. M Mr.Simiyon.I Mentor Name: Mr. Manu Assistant Professor / Mech</p> <p>Project name Semi Automatic Coconut dehusker</p>	<p>*Semi automatic type *Roller operating system is used to dehusk the coconut.</p>	<p>Prototype completed</p> 
5	<p>Team Members Mr.Jaireesh J.S Aswinth Mr.Ajith B Mr.Ajay R B Mr.Ajesh R M Mentor Name: Dr. John Iruthaya Raj Assistant Professor / Mech</p> <p>Project Name Coin Operated Rubber Rollers</p>	<p>1. Coin Acceptor setup 2.Locking system with Modified Gear arrangement 3.Timer with Electromagnetic Push and Pull Solenoid setup</p>	<p>Prototype completed</p> 

6	Student Team: Mr. Alex Sasi Mr. Dani Jaison Prakash. J.U Mr. Tom Saji Ms. Ancilin. H Mentor Name: Mr. Arthur Vasanth Assistant Professor / EEE Project Name: Solar Ultrasonic Wild Boar Repeller	Developed a prototype to support Farmers to distract the wild Boar from the farming Land.	*Prototype Completed *International Journal of engineering research and technology” (Paper Communicated) 
7	Student Team: Mr.AjinKilbert Mr.Vinish Mr.Adarsh Mr.VelbinJijo Mentor Name: Mr. John Pradeep Assistant Professor / EEE Project Name: A Smart IOT Pill Dispenser	*Developed a prototype to support elderly persons who need care.	Prototype completed 
8	Student Team: Karthisuyan Sarath joe Rahul. M Sajan r Mentor Name: Dr. Rajeev HOD/Mech Project Name: Coconut Deshelling and Grating Machine.	*Semi automatic type Cutting wheel operating system. *Speed controllable coconut grating setup	Prototype completed 
9	Student Team Mr. Joein.J Mr. R. Relton Mr. Paul Richard. D.P Ms. Sherly.B	*The system has a plucking arm positioned at the top of the telescopic pole with the rack and pinion gear assembly.	*Prototype completed *Design Patent filed

	<p>Mentor Name: Mr. Dani Assistant Professor / Mech</p> <p>Project title: Telescopic Semi-Automatic Fruit Plucker</p>	<p>*The rack has teeth cut into it and they mesh with the teeth of the pinion gear. The motor is coupled with the pinion.</p> <p>*The controlled rotary motion of the pinion is converted into corresponding linear movement of the rack.</p> <p>*The to and fro motion of the plunger will actuate the fingers to open and close.</p> <p>*The free end of the finger provides sniping action.</p> <p>*The collected fruit flows through the hollow plunger into the cloth which can be collected from the bottom.</p>	
10	<p>Student Team: Mr.SibinReji Mathew Mr.AntroAkash A Mr.Aneesh John Zachariah Mr.Anto J C</p> <p>Mentor Name: Mr. Manjusha Assistant Professor / EEE</p> <p>Project Name: An Add-On device to detect trapped human in fire accidents</p>	<p>Developed a prototype to support fire rescue care in Buildings.</p>	<p>Prototype completed</p> 
11	<p>Student Team: Mr.K.S.Ajith Mr.B.Ajil Mon</p>	<p>*Steam operated VCO cooker</p>	<p>Prototype completed (MSMEUDYAM Registration is done)</p> 

	<p>Mr.C.Vinoth Mr.K.Sajin</p> <p>Mentor Name: Mr. Jude Felix Assistant Professor / Mech</p> <p>Project name: Portable coconut oil cooker</p>	<p>*Steam was generated in a boiler and transferred through hose</p> <p>*Stir is controlled by a motor</p>	
12	<p>Student Team: Ms.Anuja M.L Ms.Jincy P, Ms.Anisha V.</p> <p>Mentor Name: Dr. Benschwartz Assistant Professor / EEC</p> <p>Project Name : VISAD: A Vision based System for patient Abnormality Detection</p>	<p>* A vision based motion detection algorithm was developed that would activate the safe system to prevent the patient falling from the bed.</p>	<p>Prototype completed</p> <p>VISAD: A “Vision based System for patient Abnormality Detection”, International journal of Engineering Research & Technology (Paper Communicated)</p> 
13	<p>Student Team Ms.ArpthaRenjan Mr.BintuBinu Thomas Ms.Jebin G.</p> <p>Mentor Name: Mrs. Ashy V Daniel Assistant Professor / CSE</p> <p>Project Name : IoT based abnormality and health monitoring system for cattle.</p>	<p>Abnormality monitoring system is a hardware/software cloudbased technology is used to remotely monitor the health status of cattle.</p>	<p>Prototype completed</p> 
14	<p>Student Team: Mr.Yesudhasxavier Mr.Shivakumar R Mr.Lijin V</p>	<p>A dedicated GUI was developed that would monitor a given multi</p>	<p>Prototype completed</p>

	<p>Mr.Gokulkrishna V S</p> <p>Mentor Name: Mr. Babin Assistant Professor / EEE</p> <p>Project Name: Instinctive fertilizer feeder for cultivation in agronomy.</p>	crop farm and irrigate with nutrition based on demand	
15	<p>Student Team: Mr.Nijin.S.T Mr.Pratheesh .S.D Mr.Jayan.J.J Mr.Jijo.J</p> <p>Mentor Name: Mr. Leo Bright Singh Assistant Professor / Mech</p> <p>Project Name Coconut scrubber and milk extractor</p>	<p>*Semi automatic type</p> <p>*Roller operating system is used for scrubbing the coconut.</p>	<p>Prototype completed</p> 

Startups Registered

Startups Registered

Name of the Startup : ASK Enterprises



भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises



UDYAM REGISTRATION CERTIFICATE



Our small hands to make you LARGE

UDYAM REGISTRATION NUMBER	UDYAM-TN-09-0011896																								
NAME OF ENTERPRISE	ASK ENTREPRISE																								
TYPE OF ENTERPRISE *	MICRO																								
MAJOR ACTIVITY	MANUFACTURING																								
SOCIAL CATEGORY OF ENTREPRENEUR	SC																								
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OFFICIAL ADDRESS OF ENTERPRISE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Flat/Door/Block No.</td> <td>8/51A</td> <td>Name of Premises/ Building</td> <td>Melakuzhinjanvilai</td> </tr> <tr> <td>Village/Town</td> <td>Vilavan Code</td> <td>Block</td> <td>Mullucode</td> </tr> <tr> <td>Road/Street/Lane</td> <td>Melakuzhinjanvilai</td> <td>City</td> <td>Marthandam</td> </tr> <tr> <td>State</td> <td>TAMIL NADU</td> <td>District</td> <td>KANNIYAKUMARI, Pin 629153</td> </tr> <tr> <td>Mobile</td> <td>9566560168</td> <td>Email:</td> <td>sudhaachu95@gmail.com</td> </tr> </table>					Flat/Door/Block No.	8/51A	Name of Premises/ Building	Melakuzhinjanvilai	Village/Town	Vilavan Code	Block	Mullucode	Road/Street/Lane	Melakuzhinjanvilai	City	Marthandam	State	TAMIL NADU	District	KANNIYAKUMARI, Pin 629153	Mobile	9566560168	Email:	sudhaachu95@gmail.com
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State	TAMIL NADU	District	KANNIYAKUMARI, Pin 629153																						
Mobile	9566560168	Email:	sudhaachu95@gmail.com																						
DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE	07/05/2021																								
DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS																									
NATIONAL INDUSTRY CLASSIFICATION CODE(S)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>S.No.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> <tr> <td>1</td> <td>32 - Other manufacturing</td> <td>3299 - Other manufacturing n.e.c.</td> <td>32901 - Manufacture of stationary articles such as pens and pencils of all kinds whether or not mechanical, pencil leads, date, sealing or numbering stamps, hand-operated devices for printing or embossing labels, hand printing sets, prepared typewriter ribbons and inked pads, globes etc.</td> <td>Manufacturing</td> </tr> </table>					S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity	1	32 - Other manufacturing	3299 - Other manufacturing n.e.c.	32901 - Manufacture of stationary articles such as pens and pencils of all kinds whether or not mechanical, pencil leads, date, sealing or numbering stamps, hand-operated devices for printing or embossing labels, hand printing sets, prepared typewriter ribbons and inked pads, globes etc.	Manufacturing										
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DATE OF UDYAM REGISTRATION	05/07/2021																								

*** In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME.**

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing:- 21/09/2021

For any assistance, you may contact:

1. District Industries Centre: KANNIYAKUMARI (TAMIL NADU)

2. MSME-DI: CHENNAI (TAMIL NADU)

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9.5 Co-curricular and Extra-curricular Activities(10)

Students are engaged in co-curricular, extra-curricular activities and field trips through student chapters and forums, which provide opportunities for students to explore new fields of interest, cultivate leadership skills, and learn teamwork. In this regard, institution has formed various committees for participating and organizing the cultural and sports activities. Every department has its own association through which department symposiums, project expo and other technical and non-technical events are being organized. These association activities benefit in developing leadership skills and make them work in teams.

A. Availability of sports and cultural facilities

Sports Facilities

The Institution has a sports ground, well equipped gym and sports kits. Students are encouraged to participate in various zonal, interzonal, inter and intra collegiate and University tournaments. Annual Sports day is celebrated with various sports events like Athletics, Long Jump, Volleyball, Table Tennis, Cricket, Chess, and Carom, both for staff and students, as part of recreation.

Table 9.7.a: List of indoor games available in the campus

Sl. No.	Name of the sport Facility
1	Badminton
2	Chess
3	Caroms
4	Table tennis
5	Gym

Table 9.7.b: List of outdoor games available in the campus

Sl. No.	Name of the sportfacility	Whether available beyond college regular timings
1	Basket ball	Yes, 4.30 pm-6.30 pm
2	Volley Ball	
3	Food ball	
4	Cricket	
5	Throw Ball	
6	Long Jump	
7	Cricket	
8	Shotput	
9	Javelin Throw	
10	Discus Throw	



Fig.9.7.a Photo gallery of Sports Activities

Achievements in sport activities:

The student achievements in sports activities in the academic year 2019- 2020 there were four awards in 4 x 400 mts running, and in Javelin Throw, Triple jump and 100 mts running there was one award. Moreover, there was first, second and third award in football, kho-kho and badminton respectively. In the academic year 2018-2019, there was one award each in triple jump, high jump and 1500 mts running. In addition, there was a third place in basket ball. In the preceding academic year (2017-2018), we are the runner in football in zonal tournament. Mar Ephraem is the Anna university Zonal sports coordinating center for Zone 19 during the academic year 2019-2020.

Table 9.7.c: Summary of achievements Students in sport activities

Sl. No	Name of the sport	No. of students won in tournaments (Zonal/State level)			
		2020-21	2019-20	2018-19	2017-18
1.	Javelin Throw		1	-	
2.	Triple Jump		1	1	
3.	High Jump		-	1	
4.	100 mts running		1	-	
5.	4*400 mts Running		4	-	
6.	1500 mts Running		-	1	
7.	Basket Ball	First	-	Third	
8.	Foot Ball		First	-	Runner
9.	Kho-kho	First	Second	-	
10.	Badminton		Third	-	
11.	Ball Badminton	Third			

12	Hockey	Second			
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Cultural Activities

The fine arts club at Mar Ephraem aims to bring out talent in the student community in all the possible forms such as music, dance, literary skills, sketching or other fine art styles. Annual Cultural Event MAR FESTA , FESTINO BEATS and TALENTO are organized in the college to give opportunity for all the students and get involved in cultural enriching activities. Students are given chance to extend themselves and to grow in their area of interest.

Cultural Facilities Available In Our Institution

S.No	Details of the facility
1.	Fine Arts Club
2.	Choir
3.	Musical instruments
4.	Clay Modeling
5.	Art from Waste
6.	Art and painting materials
7.	Auditorium

Achievements of academic Year (2019-2020)

S.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	29-02-2020	NAVAvRddhh 2020 Art from waste	S.Abina	Arunachala College of Engineering for Women	I Prize
2	29-02-2020	NAVAvRddhh 2020 Art from waste	J.D.BEAUTLIN	Arunachala College of Engineering for Women	I Prize
3	29-02-2020	NAVAvRddhh 2020 Collage work	D.Laffni	Arunachala College of Engineering for Women	I I Prize
4	29-02-2020	NAVAvRddhh 2020 Collage work	S.Seleena	Arunachala College of Engineering for Women	II Prize
5	29-02-2020	NAVAvRddhh 2020 Art from waste	S.Seleena	Arunachala College of Engineering for Women	Participated
6	29-02-2020	NAVAvRddhh 2020	S.Abina	Arunachala College of Engineering for Women	Participated

		Collage work			
7	29-02-2020	NAVAvRddhh 2020 Art from waste	D.Laffni	Arunachala College of Engineering for Women	Participated
8	29-02-2020	NAVAvRddhh 2020 Collage work	J.D.Beautlin	Arunachala College of Engineering for Women	Participated
9	24-02-2020	Drawing competition	R.K.Vijisha	Rohini College of Engineering and Technology	I Prize
10	14&15 February 2020	NEMIC FEST 2020 Elocution Competition	Bharath Krishnan	Nesamony Memorial Christian College, Marthandam.	I prize
11	14 & 15 February 2020	NEMIC FEST 2020 Solo Song Competition	Blessing Jemil.P.J	Nesamony Memorial Christian College, Marthandam	Participated
12	14 & 15 February 2020	NEMIC FEST 2020 Elocution Competition	Kebiya .G	Nesamony Memorial Christian College, Marthandam.	Participated
13	14 & 15 February 2020	NEMIC FEST 2020 Pencil Sketch Competition	R.K.Vijisha	Nesamony Memorial Christian College, Marthandam.	I Prize
14	14 & 15 February 2020	NEMIC FEST 2020 Spot Photography	Nihal	Nesamony Memorial Christian College, Marthandam.	Participated
15	14 & 15 February 2020	NEMIC FEST 2020 Solo Dance Competition	Stebin	Nesamony Memorial Christian College, Marthandam.	II prize
16	14.08.2019	Dance	Anto J C	Bethlahem Institute of Engineering	II Prize
17	14.08.2019	Dance	AntroAkash	Bethlahem Institute of Engineering	II Prize
18	14.08.2019	Dance	Abin S	Bethlahem Institute of Engineering	II Prize
19	14.08.2019	Song	Deril Jacob Robin	Bethlahem Institute of Engineering	II Prize
20	12-10-2019	Semi classical	BeautlinSumith P	Ponjesly College ofEngineering	2 nd Prize

21	23-01-2020	clay modelling	M L Anuja	Bethlahem institute of Engineering	2 nd Prize
22	08-02-2020	Quiz	JerlinPriya V M	Arunachala College of engineering for women	1 st Prize
23	15-02-2020	Jam Sketch	Jincy P	Udhaya school of Engineering	2 nd Prize
24	12-10-2019	SoloDance	Jenila J L	Mar Baselios College of Engineering & Technology	2 nd

Achievements of academic Year (2018-2019)

S.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	19-12-2018	Jingle bells'18 Group Song	BodlinLekha, Benil Jacob Robin, Deril Jacob Robin, Adlin, Ritchu, Bensingh	St. Joseph College of Education	Participated
2	08/03/2019	Group Song	Jesty James	Rohini College of Engineering and technology Tamil Nadu	II Prize
3	08/03/2019	Group Song	Sojo P Saju	Rohini College of Engineering and technology Tamil Nadu	II Prize
4	08/03/2019	Group Song	JomyElizebath	Rohini College of Engineering and technology Tamil Nadu Within State	II Prize
5	08/03/2019	Group Song	ShanyAleyamma	Rohini College of Engineering and technology Tamil Nadu	II Prize
6	03/05/2019	Paper Presentation	Merin S John	Mohandas College of Engineering & Technology Kerala	Participation
7	22/02/2019	Group Dance	JomyElizabath	Nesamony Memorial Christian College Tamil Nadu	I Prize
8	22/02/2019	Group Dance	Sarannya	Nesamony Memorial Christian College	I Prize
9	22/02/2019	Group Dance	Merlin thankam	Tamil Nadu	I Prize

10	22/02/2019	Group Dance	Karthika P	Nesamony Memorial Christian College	I Prize
11	29/03/2019	Group Song	Dona Sabu	Musaliar College Of Engineering & Technology Kerala	I Prize
12	29/03/2019	Group Song	AshanaBobachan	Musaliar College Of Engineering & Technology Kerala	I Prize
13	29/03/2019	Group Song	Jeffy Grace	Musaliar College Of Engineering & Technology Kerala	I Prize
14	29/03/2019	Group Song	Divya P	Musaliar College Of Engineering & Technology Kerala	I Prize
15	29/03/2019	Group Song	Jithin James	Musaliar College Of Engineering & Technology Kerala	I Prize
16	29/03/2019	Group Song	Adone Y Babu	Musaliar College Of Engineering & Technology Kerala	I Prize
17	29/03/2019	Group Song	Alwin David	Musaliar College Of Engineering & Technology Kerala	I Prize
18	29/03/2019	Best Actor	Alex Mathew	Musaliar College Of Engineering & Technology Kerala	II Prize
19	28/02/2019	Group Dance	JomyElizabath	Rohini College of Engineering and technology, Tamil nadu	II Prize
20	28/02/2019	Group Dance	Sarannya	Rohini College of Engineering and technology	II Prize
21	28/02/2019	Group Dance	Merlin thankam	Rohini College of Engineering and technology	II Prize
22	28/02/2019	Group Dance	Karthika P	Rohini College of Engineering and technology	II Prize
23	26/04/2019	Music Band	Ben Singh Joshua	Mar Baselious College of Engineering & Technology Kerala	II Prize
24	26/04/2019	Music Band	Adone Y Babu	Mar Baselious College of Engineering & Technology Kerala	II Prize
25	26/04/2019	Music Band	Alwin David	Mar Baselious College of Engineering & Technology Kerala	II Prize
26	26/04/2019	Music Band	Dona Sabu	Mar Baselious College of Engineering & Technology Kerala	II Prize
27	26/04/2019	Music Band	AshnaBobachan	Mar Baselious College of Engineering & Technology Kerala	II Prize

28	26/04/2019	Music Band	AlwinRaju	Mar Baselious College of Engineering & Technology Kerala	II Prize
29	26/04/2019	Photo Contest	Karthika	Aspire 2019,IET Kanyakumari Local Network	Participation
30	26/04/2019	Photo Contest	Biljila	Aspire 2019,IET Kanyakumari Local Network	Participation
31	19-12-2018	Singing	Benil Jacob Robin	St.Josaeph College of Education	II Prize
32	19-12-2018	Singing	Deril Jacob Robin	St.Josaeph College of Education	Participated
33	11-08-2018	Folk Dance	AbiMol A N	Mar BaseliosCollegeofEngineering&Technology	1 st prize
34	18-08-2018	Quiz	SnehaBabuji	Bethlahem institute ofEngineering	1 st Prize
35	11-08-2018	Clay modelling	Stephy R Jose	Arunachala College of engineering for women	2 nd Prize
36	02-02-2019	Word hunt	Ahisha R K	Udhaya school of Engineering	1 st Prize
37	16--02-2019	Solo song	Merlin Preetha	Ponjesly College ofEngineering	2 nd Prize

Acheivements of academic Year (2017-2018)

Sl.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	20/10/2017	Face Painting	Akhil Mon(CSE)	Trinity College of Engineering,Kerala	I prize
2	16-12-2017	Light music Competition	Benil Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
3	16-12-2017	Light music Competition	Smith Jisho	Nesamony Memorial Christian College, Marthandam	III Prize
4	16-12-2017	Light music Competition	Deril Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
5	16-12-2017	Light music Competition	AdlinShiji	Nesamony Memorial Christian College, Marthandam	III Prize

6	16-12-2017	Light music Competition	Beautlin Femi	Nesamony Memorial Christian College, Marthandam	III Prize
7	16-12-2017	Light music Competition	Recslin	Nesamony Memorial Christian College, Marthandam	III Prize
8	16-12-2017	Light music Competition	Richu Rajesh Singh	Nesamony Memorial Christian College, Marthandam	III Prize
9	16-12-2017	Light music Competition	Bensingh	Nesamony Memorial Christian College, Marthandam	III Prize
10	16-12-2017	Western music Competition	Benil Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
11	16-12-2017	Western music Competition	Smith Jisho	Nesamony Memorial Christian College, Marthandam	III Prize
12	16-12-2017	Western music Competition	Deril Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
13	16-12-2017	Western Song Competition	AdlinShiji	Nesamony Memorial Christian College, Marthandam	III Prize
14	16-12-2017	Western Song Competition	Beautlin Femi	Nesamony Memorial Christian College, Marthandam	III Prize
15	16-12-2017	Western Song Competition	Recslin	Nesamony Memorial Christian College, Marthandam	III Prize
16	16-12-2017	Western Song Competition	Richu Rajesh Singh	Nesamony Memorial Christian College, Marthandam	III Prize
17	16-12-2017	Western Song Competition	Ben Singh	Nesamony Memorial Christian College, Marthandam	III Prize
18	22&23 February 2018	Nemic Fest '18 Pencil Sketch	Arun	Nesamony Memorial Christian College, Marthandam	I prize
19	23/02/2018	Face Painting	Akhil Mon(CSE)	Sahrdya College of Engineering & Technology Trinity	I prize

				College of Engineering Kerala	
20	23/02/2018	Face Painting	Ajin S A(CSE)	Sahrdya College of Engineering & Technology Kerala	Participation
21	15-03-2018	Mobile Photography	GibinKuruville	Bethlahem I nstitute of Engineering	Participation
22	15-03-2018	Mobile Photography	Ajin P.	Bethlahem I nstitute of Engineering	Participation
23	15-03-2018	Mobile Photography	Alen Chris Biju	Bethlahem I nstitute of Engineering	Participation
24	15-03-2018	Mobile Photography	Abhijith K	Bethlahem Institute of Engineering	I prize
25	15-03-2018	Mobile Photography	AravindGopal	Bethlahem I nstitute of Engineering	II prize
26	05.01.2018	Song	Ranju Varghese	Malankara Catholic College	II prize
27	05.01.2018	Song	Derick J Robin	Malankara Catholic College	II prize
28	05.01.2018	Song	PrincyKoshy	Malankara Catholic College	II prize
29	18-02-2018	Folk Dance	Vijithra P	St.Xaviers catholic College of Engineering	1 st prize
30	01-03-2018	Poster Designing	Sruthi Sunil Mathews	Arunachala College of engineering for women	1 st prize
31	27-01-2018	Solo Dance	BodlinLakha	Udhaya school of Engineering	2 nd Prize
32	27-01-2018	Clay Modelling	Prabin S	Mar Baselios College of Engineering & Technology	1 st Prize
33	24/03/018	Quiz	RijilRaju	Bethlahem institute ofEngineering	2 nd Prize

A. NCC, NSS and other clubs

NSS UNIT in Mar Ephraem is organizing several useful programs for the society. The Motto of NSS "Not Me But You", reflects the essence of democratic living and upholds the need for self-less service. NSS helps the student's development & appreciation to other person's point of view and also show consideration towards other living beings. The programs like pond cleaning, helping towards flood affected people, Health education programs, tree plantation and village adoption are successfully conducted.

List of NSS Activities:

Table 9.7.d: Summary of NSS activities

S.No	Date	Events
1	17/12/2021	Legal aid awareness programme
2	07/04/2021	World Health
3	04/03/2021	Road safety Programme
4	10-02-2020	Novel corona virus Awareness Program
5	03-03-2020	Nilavembukudineer issuing
6	16-07-2019	Awareness program on climatic change and human rights
7	13-07-2018	Awareness program on Organic farming and green campus
8	30-07-2018	Charity work to flood affected peoples in kerala
9	15-09-2018	Nilavembukudineer issuing
10	22-02-2017	Pond cleaning
11	09-02-2017	Village adopting programme



Fig.9.7.b Photo gallery of NSS Activities

YRC (Youth Red Cross)

The Red Cross is an international organization meant for humanitarian services. It is a non- religious, nonpolitical and a non-sectarian international body. YRC is a part of the Indian Red Cross Society; it was inaugurated at Mar Ephraem in 2010 with well-defined objectives such as: Protection of Health and Life Service to the sick and the suffering by organizing various health camps, awareness program such as eye camps, vaccination camps, health awareness, AIDS Eradication. The students of Mar Ephraem are donating the blood frequently on request by the public/Hospitals through YRC coordinator.

List of YRC Activities:

Table 9.7.e: Summary of YRC activities

S.No	Date	Events
1	2/03/2020	Drug Awareness Programme
2	1/12/2020	Aids Awareness Programme
3	1-10-2019	World Heart Day Celebration
4	6-08-2018	Blood Donation Camp
5	18-09-2018	AIDS Awareness Program
6	9-09-2018	YRC ICTC vist
7	28-01-2017	AIDS Awareness programme
8	10-10-2017	Blood Donation Camp



Fig.9.7.c Photo gallery of YRC Activities

NCC

Mar Ephraem has initiated the process of establishing the NCC unit in the premises. We have submitted the application to the 11th battalion NCC office at Nagercoil and in waiting list. Also, we have applied for the same under FSFS (Fully Self-Financing Scheme) so that the unit will be started within a short span of time.

Other Clubs:

- International, national and internal professional Bodies for Co-Curricularactivities
 - IET
 - ISTE
 - SAE
 - IEEE
 - IPR
 - Robotics Club
 - Research and developmentCell
- Non-professional Bodies for Co-Curricular and Extracurricularactivities
 - NSS
 - Youth RedCross
 - Sports Club
 - EcoClub
 - Green EnergyCell
 - Women's Cell
 - Fine ArtsClub

B. Annual Students Activities:

- Institution organizes Mar Festa, Sports Day, Festino Beats and College Day every year for the technical, sports and cultural activity enhancement of the students.
- Every school associations organizes symposium, conference, technical competitions, interaction with alumni, industrial experts and academicians, workshop, industrial visit, seminars, guest lectures, educational tour etc.
- International and national professional bodies' student chapters help students in developing technical, personal skills by conducting technical seminars, workshop, industrial visit, charity visits, providing scholarships and presenting awards.
- Robotic club train the students with the hardware kit sponsored by MHRD and shape them to participate and win robotic competitions.
- Research Committee motivates and coordinates all the research activities of the college.
- NSS organizes NSS camp, visit to orphanages, conduct of disease awareness programs.
- YRC organizes blood donation awareness program, blood donation camp, deworming day.
- Sports division conducts university zonal level sports competitions and college annual sports day. Train and make students participate and win in zonal and state level sports competitions.
- Women cell works for the empowerment of the female students and conduct many awareness and empowerment programs. It celebrates Women's Day every year.
- Fine Arts Club organizes and coordinates all the cultural activities in the college and participation outside

the college and organizes inter college cultural competition Mar Festa inter college cultural and Festino Beats every year



Fig.9.7.c Photo Gallery of the Cocurricular& Extra-Curricular Activities

10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120
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10.1. ORGANIZATION, GOVERNANCE AND TRANSPARENCY (40)

10.1.1. State the Vision and Mission of the Institution (5)

Vision

A world class Malankara institution of higher learning renowned for its excellence in Science and Technology and for its commitment to the holistic development of the individual and Society.

Mission

To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement.

10.1.2. Governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment and promotional policies (10)

Mar Ephraem College of Engineering and Technology is established, owned and administered by the Catholic Diocese of Marthandam. His Excellency Dr.Vincent Mar Paulos, Bishop of the Catholic Diocese of Marthandam is the Chairman of the College, wielding all the executive and ownership authorities.

The Bishop of Malankara Diocese of Marthandam constitutes a Governing Council in order to help the management in the administration of the college by making suitable policies and guidelines. Correspondent is the secretary of the Governing Council.

The major policy decisions of the College are taken by the Governing Council. These policy decisions are made operational by the Academic Planning Council. The College activities are primarily managed by Academic Planning Council, IQAC and other academic Committees.

Governing Council

Governing Council meets once in every six months and on need bases when ever required. The tenure of the council is three years and will be elected by the local society. The members of the Governing Council and their roles were as follows

Table 10.1.2.a: Governing Council in CAY (2019-20)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary

4	Rev. Fr. Sunny Mathew	Chancellor, Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Table 10.1.2.b: Governing Council in CAYm1 (2018-19)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor, Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Table 10.1.2.c: Governing Council in CAYm2 (2017-18)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman

2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor,Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Functions and responsibilities of the Governing Council

- To control the financial affairs of the college and to approve the annual and supplementary budgets.
- To formulate the general plan and policies of the college.
- To approve the infrastructure development of the institution.
- To make, amend or revoke bye-laws and regulations for the management of the college and its affairs.

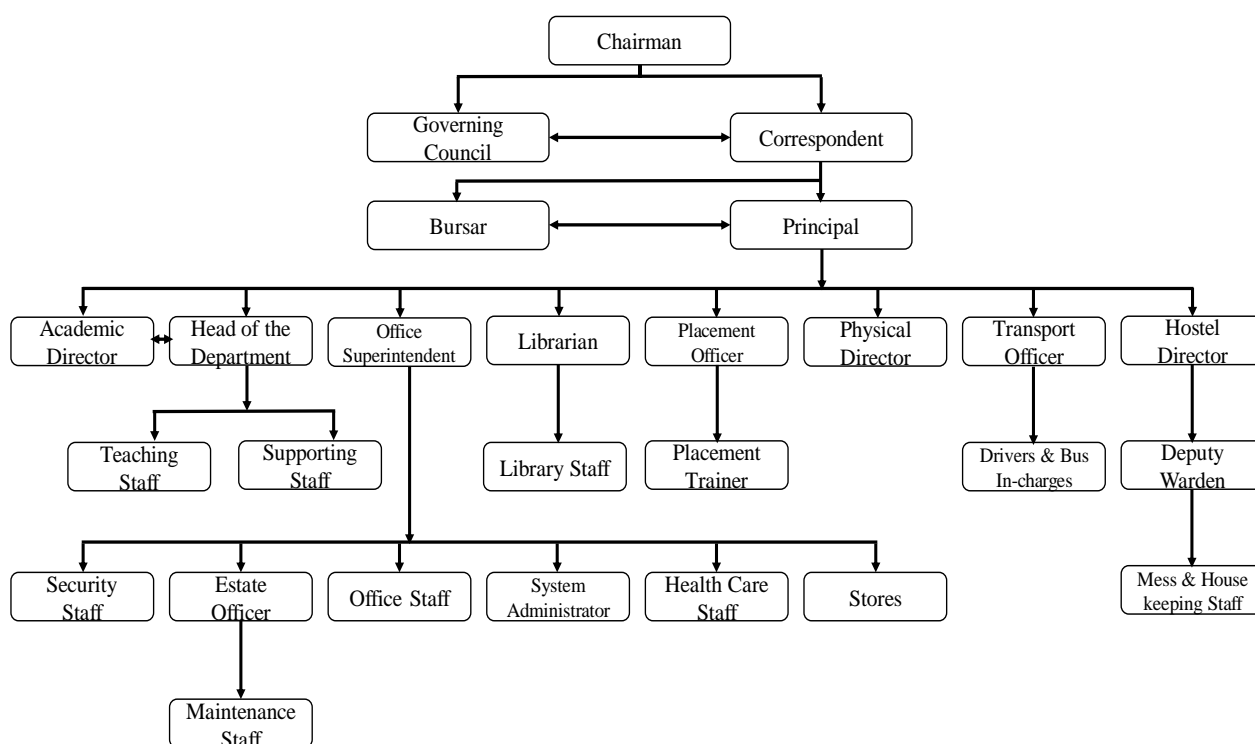


Figure 10.1.2.a: Governing Council Organization Chart

Academic Planning Council

Academic Planning council meets once in every two months and on need basis whenever requires. All the academic matters were discussed in the council and necessary actions will be taken in this regard. The Academic Planning council has the following responsibilities:

- To finalize all academic related matters including the preparation of academic calendar, result analysis of internal and university examinations etc.
- Making Policies and sub committees on all matters related to teaching, research and development programs.
- Responsible for assuring quality including academic integrity, assessment and research output.
- All disciplinary actions will be executed by the council.

Members of Academic Planning council

Table 10.1.2.e: Academic Planning Council in CAY (2019-20)

Sl No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person

2	Dr.N.Austin	Academic Director	Member
3	Mrs. T. PriyaViji	HOD/S&H	Member Recording Secretary
4	Dr.V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech./ IQAC coordinator	Member
6	Dr.D.R. Anand Rejilin	HOD/Civil	Member
7	Mr. P.Anish John Paul	HOD/EEE	Member
8	Mrs. Dr.D.Dhanya	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mr.S.Arun	Staff Secretary	Member

Table 10.1.2.f: Academic Planning Council in CAYm1 (2018-19)

Sl No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs. T. PriyaViji	HOD/S&H	Member Recording Secretary
4	Dr.V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech./ IQAC coordinator	Member
6	Dr.D.R. Anand Rejilin	HOD/Civil	Member
7	Mr. P.Anish John Paul	HOD/EEE	Member
8	Mrs. Dr.D.Dhanya	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member

11	Mr.R.Leo Bright Singh	PRO	Member
12	Mr.S.Arun	Staff Secretary	Member

Table 10.1.2.g: Academic Planning Council in CAYm2 (2017-18)

Sl No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs. M.Jeba Priya	HOD/S&H	Member Recording Secretary
4	Dr. V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech / IQAC coordinator	Member
6	Dr. D.R.Anand Rejilin	HOD/Civil	Member
7	Mr. M.Anish John Paul	HOD/EEE	Member
8	Mr. Ashwin G.Singerji	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mrs. M.V.Sonia Vinni Parrot	Staff Secretary	Member

IQAC

Internal Quality Assurance Cell (IQAC) meets once in every three months and on need basis when ever required.

Responsibilities:

- Development and execution of quality benchmarks/parameters for the various academic and administrative programs of the College.
- Facilitating the creation of a learner-centric environment for quality education and faculty improvement to adopt the required knowledge and technology for participatory teaching and learning process.
- Arrangement of feedback responses from students, parents and other stakeholders on quality-related institutional programs.

- Dissemination of information on the various quality parameters of higher education and to conduct periodic auditing in the departments.
- Documentation of the various programmes /activities of the institution, leading to quality improvement.

Members

Table 10.1.2.i: IQAC in CAY (2019-20)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R.Anand Rejilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mrs.Dr.D.Dhanya	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP, ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor, Annai Builders, Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni

20	Mr.Prince F M	Student, III year CSE	Member-Student
21	Dr.D.Rajeev	HOD,Mech	Co-ordinator, IQAC

Table 10.1.2.j: IQAC in CAYm1 (2018-19)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R.Anand Rejilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mrs.Dr.D.Dhanya	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP, ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor,	Member- Industry

		Annai Builders, Azhiyamandapam	
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr.Amruthya S. Nair	Student, II year Mech.	Member-Student
21	Dr.D.Rajeev	HOD,Mech	Co-ordinator, IQAC

Table 10.1.2.k: IQAC in CAYm2 (2017-18)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R. Anand Regilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mr.Ashwin G Singergi	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP,ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society

18	Mr.A.Raj	Proprietor, Annai Builders, Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr.Sobin Solomon	Student, III year Civil	Member-Student
21	Mr. J. Bright Brabin Winsley	AP/ Civil	Co-ordinator, IQAC

Anti Ragging Committee

- The college has an Anti-Ragging committee; the members from different departments are selected to monitor any ragging activities in the campus. The students facing any such circumstances/ any source of ragging were requested to immediately report to any of the committee members. The Committee meets twice in a year.
- All the squad members are made as conveners of a particular day in a week with around 10-12 teaching/non-teaching members assisting them.
- Critical points are identified in the campus and during the lunch break time (12:30 PM to 1:15 PM) according to their allotted duty on a particular day, faculties go to monitor the area in which they were allotted.
- Another committee monitors the first year block, canteen, college bus, store, etc.

Members

Table 10.1.2.m: Anti Ragging Committee Members

Sl.No	Name	School	Designation	Role
1	Mr.R.S.Vinoth	S&H	A/P	Coordinator
2	Dr.N.Austin	Mech	Academic Director	Member
3	Mr.Sam J.Palson	Physical Director	PD	Member
4	Mr.S.Stanly Jino	Men's Hostel	Deputy Warden	Member
5	Mr.R.Rajesh	Men's Hostel	Deputy Warden	Member
6	Sr.Leena Mathew	Women's Hostel	Deputy Warden	Member
7	Sr.Navin	Women's Hostel	Deputy Warden	Member
8	Sr.Annamal	Counsellor	Counsellor	Member

9	Dr.D. Rajeev	Mech	HOD/Mech	Member
10	Dr. D.R.AnandRejilin	Civil	HOD/Civil	Member
11	Dr.V.Suresh	ECE	HOD/ECE	Member
12	Dr.D.Dhanya	CSE	HOD/CSE	Member
13	Mr. M.Anish John Paul	EEE	HOD/EEE	Member
14	Mrs.M.Jeba Priya	H&S	HOD/S&H	Member
15	Mr.Ajesh V.S	Mech	Student	Member
16	Ms.Nitha Mohan	CSE	Student	Member

Committee against Sexual Harassment of Women

Roles and Responsibilities of the Committee

- To safeguard the rights of female students, to give proper guidance to the students in need, to provide a platform for listening to complaints regarding sexual harassment.
- To take initiative to conduct classes, awareness program for boys and girls to ensure a rapport among students in the campus and for the overall development as a successful person.
- The Committee meets once in every Semester.

Table 10.1.2 .n: Members of Committee against Sexual Harassment of Women

Sl.No	Members Name	School	Designation	Role
1	Dr.A.Seema	S&H	A/P	Convenor
2	Mrs.P.S.Jeba	ECE	A/P	Member
3	Mrs. L R Bindhu	H&S	A/P	Member
4	Mrs. D.S.Manjoram	Civil	A/P	Member
5	Mrs. Shobana	CSE	A/P	Member
6	Mrs. T.C.Belicita Charles	EEE	A/P	Member
7	Mrs. C.S.Sudha	Office	Receptionist	Member
8	Mrs. Prema	CSE	Lab assistant	Member
9	Mrs. S. Vnitha	MIDS	Social Worker	Member

Discipline Committee

As per the instruction of the Academic planning council it is the responsibility of the committee to maintain the overall discipline of the Campus. Discipline Committee is constituted to assist the principal to enquire about the complaint and submit the report to the Principal. The committee meets once in every month.

Table 10.1.2.o: Discipline Committee Members

Sl.No	Name	School	Designation	Role
1	Mr.Sam J.Palson	Physical Director	PD	Coordinator
2	Mr.P.Anto Paulin Merinto	Mech	A/P	Member
3	Mr.J.M.Aravind	ECE	A/P	Member
4	Mr.G.Jein Jenish	Civil	A/P	Member
5	Mr.R.S. Vinoth	H&S	A/P	Member
6	Mr.S.Stalin	EEE	A/P	Member

10.1.2. B Service Rules Procedures and Policies

The service rules are published by the management and it will be revised from time to time as and when required. The Recruiting and promotion procedure of faculty members is as per AICTE Norms. The details of the Service Rules and Policy Manual are available in our institute website.

Published service rules web link: marephraem.edu.in/service-rule.pdf/

10.1.2.C Minutes of meeting and action taken report**Table 10.1.2.p: Details of committees meeting**

Name of the Committee	Number of Members	Functions and Responsibilities	Frequency of meeting	Attendance of the latest meeting (2020-2021)
Governing Council	14	The highest level of decision maker with the authority to form the policy and govern the institution.	Twice in a year	14
Academic Planning Council	12	<ul style="list-style-type: none"> Monitors and coordinates all the academic related activities of the institution and to promote quality research. Encourage extension and community services to install community social responsibilities among students. 	Once in every two months	11
IQAC	21	<ul style="list-style-type: none"> Develop and execute the quality benchmarks for the various academic and administrative programs of the College and documentation of the same. 	Once in every three months	19

		<ul style="list-style-type: none"> Facilitating the creation of a learner-centric environment for quality education and faculty improvement. Arrangement of feedback responses on quality-related institutional programs. Dissemination of information on the quality parameters of higher education and to conduct periodic auditing in the departments. 		
Anti Ragging committee	16	<ul style="list-style-type: none"> To ensure compliance with the directions of the honorable supreme court of India at institute level. To prohibit any conduction by any student/ students whether by words spoken / written / by an act which has the effect of teaching, treating or handling. 	Twice in a year	15
Disciplinary Committee	8	<ul style="list-style-type: none"> To help maintain discipline in the college campus. To enforce dress code among the students. To monitor the movement of the students in order to prevent indiscipline and misbehaviors in the campus. To assist the anti-ragging committee in preventing ragging of any form in the campus. 	Once in a month	7
Committee against Sexual Harassment of Women	9	<ul style="list-style-type: none"> To safeguard the rights of female students, to give proper guidance to the students in need and to provide a platform for listening the complaints regarding sexual harassment. 	Once in a semester.	8

Table 10.1.2.q: Sample minutes and action taken

Name of the Committee	Sample minutes	Action taken
Governing council	1. Fr.Josephin Raj, Correspondent and Ex officio secretary of the Council presented the previous meeting report and	i. Financial Statement for the year 2019-20 is approved

	<p>financial report. The same was approved by the council. He also briefed the action taken based on the report.</p> <ol style="list-style-type: none"> Members are requested to offer their valuable comments and suggestions for improvement of the institution in all spheres The following points are discussed Members appreciated the Efforts of the Principal and Team for taking the efforts for establishing ACIC Mar Ephraem incubation forum in the College Premises and granted permission to go ahead with the activities related to the same. Members reviewed the budget utilization for the year 2019-2020 Members appreciated the principal and the academic team for their consistent efforts. Staff should be motivated to register for online courses as a part of continuous improvement. Members expressed their happiness on the research activities happening in the college 	<ol style="list-style-type: none"> NewGen IEDC building is Opened Staff were encouraged to register for online FDP The staff has not registered for PhD. were motivated to apply for the same.
Academic Planning Council	<p>Preparation of Academic Calendar for the year 2020-21 was discussed.</p> <p>Staff were encouraged to register for online FDP</p> <p>The staff has not registered for PhD. Should be encouraged to register for the same.</p> <p>Decision is made to conduct the Technical symposium at the department level</p>	<p>Academic Calendar is prepared</p> <p>Informed to all the teaching staff to do online FDP conducted by reputed organizations.</p> <p>The staff have not registered for PhD. were motivated to apply through the respective Head of the departments.</p> <p>Departments were informed and the same was executed.</p>
IQAC	<p>The meeting began with the opening remarks of the IQAC coordinator.</p> <p>Discussed about the question paper pattern. All departments were directed to submit their question paper format to IQAC</p> <p>Discussed about the online feedback submitted by the students.</p>	<p>All departments are directed to submit their question paper format to IQAC</p> <p>Students are informed to Submit the online feedback</p>

	Departments are requested to motivate their students to publish papers in indexed journals	Students were motivated to publish papers in indexed journals
Disciplinary committee	It was found that some of the students had angry arguments among themselves near to the library for a simple issue between John Prabhakar of third year Mechanical Engineering and R.Rexcily Rijo of second year Electronics and communication Engineering .	The committee members conducted an inquiry and the students were severely warned.
Anti Ragging committee	Anti-ragging Committee meeting conducted at Principal office by the Anti-ragging committee members. It is decided to prepare the Anti ragging committee Affidavit for the first year students	Anti ragging committee Affidavit is prepared for first year students and their parents.

10.1.3. Decentralization in working and grievance redressal system (10)

A. List the names of the faculty members who have been delegated powers for taking administrative decisions

Administrative Setup within the college

For the smooth functioning of the institute the following powers have been delegated among the following members. Their responsibilities and administrative powers are listed below.

Correspondent

- The Ex officio Secretary of the governing body
- Responsible for framing general policy matters of the institute in consultation with Governing Body (GB).
- Responsible for the implementation of decision taken in the GB.
- Appointing authority of all staff in the institute.
- Have the power to take disciplinary action against any staff in the institute on the basis of the recommendation of the discipline committee.
- Co-ordinate the preparation of annual plan and budget with the help of the Principal, Bursar, Office Superintendent and present it to the Governing Council for approval.
- Responsible for the infrastructure development of the Institute.

Bursar

- Assist the Correspondent for the finance management of the Institute.
- Custodian of liquid cash of the institute and verify the cash on a daily basis.

- Render all necessary help to the Correspondent for the management of the Institute.
- Assist the Correspondent to prepare annual plan and budget of the institute.

Principal

- Responsible for managing the faculty and technical staff in day to day work .
- Head of the college and responsible for maintaining high academic standards
- Maintain discipline among staff and students with help of Academic Director and HOD's.
- Liaison with AICTE/University/Government.
- President of the Parents Teachers Association.
- Coordinate the student admissions and all programmes conducted within the college.
- Responsible for conducting Internal/University examinations and forwarding the required academic data to the university.
- Prepare Human resource requirement of faculty and technical staff in various departments in consultation with concerned HOD's and place the same before the Governing Council through the Correspondent.

Academic Director

- Responsible for the smooth conduct of the Teaching Learning Process
- Responsible for the faculty development activities
- Maintaining the discipline among the staff and students

Head of the Department

- Responsible for the smooth conduct of the department
- Ensure the discipline of staff and students within the department
- Submit the budget proposal and take initiative for the all the purchase activities.

Office Superintendent

- Managing office, supply stocks and placing orders preparing regular administrative report
- Responsible for management of all non teaching staffs (office staff, gardeners, security etc).
- will be in charge of sending and receiving all official correspondence
- Has to establish the work priorities, delegate work to the office support staff and ensure deadlines are met and procedures are followed.
- To look after the maintenance of services

Placement Officer

- Responsible for entire placement activities of the Institute.

- Mediator between Institute and companies.
- Responsible for conducting various placement training for the students in the Institute.

Table 10.1.3.a: Faculty assigned for taking the Additional/ Administrative responsibilities

S.No	Name of the member of faculty	Basic academic designation	Additional / Administrative responsibility
1.	Dr.N.Austin	Professor of Mechanical Engineering	Academic Director
2.	Dr.D.Rajeev	Professor of Mechanical Engineering	HOD, Mech. Engg.
3.	Dr.V.Suresh	Professor of ECE	HOD, ECE
4.	Dr.D.R.Anand Rejilin	Associate Professor of Civil Engineering	HOD, Civil
5.	Dr.D.Dhanya	Associate Professor of CSE	HOD, CSE
6.	Mr.M. Anish John Paul	Assistant Professor of EEE	HOD, EEE
7.	Mrs.M.Jeba Priya	Assistant Professor of S&H	HOD, S & H
8.	Mr.Sam J. Palson	Physical Director	Physical Director
9.	Mr.Charles Dyson	Assistant Professor of Civil Engineering	Placement Officer
10.	Mr.Beschi Selvan S.L.	Assistant Professor of Mechanical Engineering	Transport Officer

B. The Mechanism and Composition of Grievance Redressal Cell

Grievance redressal mechanism

- If a complaint is received from a student, it will be handed over to the Principal immediately.
- Principal in consultation with Academic Planning council will hand over the complaint to the grievance redressal committee.
- The committee will enquire about the complaints within the stipulated time and the report will be handed over to the Principal.
- The committee report will be discussed in the college council and the council will decide the disciplinary action.
- The action will be informed to the parents also.
- The parents along with the accused students have to meet the Principal before the student is permitted to attend the class.
- If there is issue of serious manhandling the matter will be reported to the police.
- In the case of academic grievances the matter will be handed over to the Head of Department for enquiry and report.
- Principal will suggest suitable measures based on the report.

Table 10.1.3.b: Composition of Grievance Redressal Cell

Members Name	Department	Designation	Role
Dr.A.Seema	S&H	A/P	Convenor

Mr. S.Vijayakumar	Mech	A/P	Member
Mrs.D.S. Manju Ram	Civil	A/P	Member
Mr. S.Stanly Jino	Hostel	Deputy Warden	Member
Mrs. Suja	Chemistry	Lab Assistant	Member

C. Action taken report of grievance redressal cell

Table 10.1.3.c: Details of Action taken report of grievance cell

Nature of grievance	Description of grievance reported	Action taken
Academic/ infrastructur e	<ul style="list-style-type: none"> Few girl students expressed their discomfort and they feel insecure while using social networking websites. Some girl students are found disturbed by peer Pressure. 	<ol style="list-style-type: none"> Awareness were given to female students about the usage of social networking websites Special Counseling is arranged.

10.1.4. Delegation of Financial Powers (10)

In order to improve and reform financial administration in the college, powers have been delegated to Principal , Heads of the Departments and placement officer for facilitating expeditious decision making and for speedy implementation of schemes.

A. Financial Power Delegated

Table 10.1.4: Financial Power Delegated

Sl.No	Designation	Financial Power
1	Principal	RS.1,00,000/-
2	HOD	RS.20,000/-
3	Placement Officer	RS.20,000/-
4	Cells and Committee	RS.5000/-

B. Utilization of Financial Power

All the financial matters were dealt by the management. In order to face the urgent unavoidable needs financial power are delegated to the Principal, HOD, Placement Officer and the in charges of various cells and committees. For unexpected urgent needs the money within the financial power will be utilized by the respective in charges and the same will be submitted later to the management with necessary details for approval.

10.1.5 Transparency and availability of correct / unambiguous information in public domain(5)

A. Information on the policies, rules, processes to be made available on website

Available on the college website.

Transparency

The college takes the following measures to render transparency.

Academic and Administrative Transparency:

- The decisions taken and the issues discussed in academic planning council are informed to the faculty in the meetings of the various departments by Heads of Departments.
- All the decisions taken by the statutory bodies pertaining to particular items are informed to the staff.
- Attendance of students has to be posted every month by the class advisor and the consolidated attendance is further displayed on the notice boards for the information to the students. Student's attendance is also sent to the respective parents periodically.
- The Mandates are presented on the website including the academic regulations and syllabus.
- All the information about the college is available on the college website.
- Making all the relevant documents available at the time of inspection to several bodies Including Social welfare departments, university committees, AICTE & NBA.

B. Dissemination of the information about student, faculty and staff

- Information on policies, rules, and processes are disseminated to the stakeholders through the college website.
- All the issues are discussed in the meetings of the Heads of Departments, which are held periodically and the minutes of which are circulated to all the departments.
- All the important informations are sent to the faculty, staff and students.
- There are Notice Boards in all the blocks through which information is disseminated to the staff and students and most significant circulars are sent to the classrooms.

10.2. Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Summary of Current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial Years

Total Income at Institute level: For CFY, CFYm1, CFYm2, CFYm3& CFYm4

Table 1- CFY 2020-21

Total Income				Actual Expenditure (till 31-3-2021)			Total No.of Students 1143
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
385.51	134.2	91.75	42.09	602.94	91.56	264.93	0.84

Table 2- CFYm1 2019-20

Total Income				Actual Expenditure (till 31-3-2020)			Total No.of Students1302
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
440.22	262.99	70.60	58.54	837.95	24.87	87.08	0.73

Table 3- CFYm2 2018-19

Total Income				Actual Expenditure (till 31.3.2019)			Total No.of Students 1383
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
786.37	54.87	66.10	16.42	732.44	100.75	48.45	0.64

Items	Budgeted in 2020-2021	Actual Expenses in 2020-2021	Budgeted in 2019-2020	Actual Expenses in 2019-2020	Budgeted in 2018-2019	Actual Expenses in 2018-2019	Budgeted in 2017-2018	Actual Expenses in 2017-2018	Budgeted in 2016-2017	Actual Expenses in 2016-2017
Infrastructure Built-Up	100.00	86.97	20.00	18.14	100.00	98.96	200.00	196.79	180.00	195.56
Library	5.00	1.38	2.50	0.42	1.00	1.00	5.00	5.09	0.20	0.58
Laboratory Equipment	3.45	3.21	6.00	6.31	2.00	1.80	37.00	36.91	5.62	6.17
Laboratory consumables	0.15	0.11	0.88	0.86	2.00	2.11	2.25	1.58	1.18	1.22
Teaching and non-teaching staff salary	364.62	269.75	354.00	336.43	380.36	460.71	330.75	384.95	315.00	335.48
Maintenance and Spares	14.74	14.32	6.00	7.89	10.00	11.20	20.00	22.99	10.00	9.05
R&D	270.30	265.70	84.43	87.71	50.00	49.45	47.00	47.47	2.50	3.45
Training and Travel	13.50	7.69	8.00	7.69	10.00	8.15	10.00	8.58	8.00	7.04
Miscellaneous Expenses*	0	0	0	0	0	0	0	0.10	0	0.61
Administrative Expenses	74.68	71.77	105.00	106.44	130.00	126.38	180.00	185.33	200.00	191.36
Financial Charges	128.50	121.78	120.00	123.17	120.00	121.78	120.00	121.78	120.00	116.90
Total	974.94	842.68	706.81	695.05	805.36	881.54	952.00	1,011.56	842.50	867.42

10.2.1 Adequacy of budget allocation (10)

The budget is progressively increased every year to meet the purchase and servicing of equipment, replacement of condemned and creation of new labs to cope up with the upgraded syllabus

A. Quantum of budget allocation for three years

S. No.	2020-2021 (Lakhs)	2019-2020 (Lakhs)	2018-2019 (Lakhs)
1	974.94	706.81	805.36

B. Justification of budget allocated for three years

The yearly budget is prepared based on the needs & requirements of the College and Various Departments by taking into consideration of purchase of laboratory & infrastructure developments, Students, faculty & staff requirements and promotions. Budget estimates will be prepared by each department and will be reviewed in HODs meeting with the Principal. After having deliberations, prepared budget made altered in the departments and forwarded to the Principal for preparing final budget at college level. The final budget is sent to Management for approval and sanction. The Management will approve after passing the same in the Governing council meeting. The allocation of budget and utilization for the last three years is adequate.

10.2.2. Utilization of allocation funds (15)**A. Budget utilization for three years**

Years	Budgeted in (Lakhs)	Expenses in (Lakhs)	Utilization of funds %
Budget in CFY (2020 - 2021)	974.94	842.68	86.43
Budget in CFY m1(2019 - 2020)	706.81	695.05	98.37
Budget in CFYm2 (2018 - 2019)	805.36	881.54	100

10.2.3. Availability of the audited statements on the institute's websites (5)**A. Availability of Audited statements on website: Available****10.3. Program Specific budget Allocation, Utilization(30)****Table 1- CFY 2020-21**

Total Budget:		Actual Expenditure (Till.....)		Total No of Students -351
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
1,04,500	1,50,04,000	94,924	1,42,34,738	42,395

Table 2- CFY m1 2019-20

Total Budget:		Actual Expenditure (Till.....)		Total No of Students -413
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
1,80,000	89,47,000	1,90,948	1,00,99,862	26118.81

Table 3- CFY m2 2018-19

Total Budget:		Actual Expenditure (Till.....)		Total No of Students-472
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Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
63,000	1,01,28,200	56,592	1,00,35,893	23201.11

Items	Bud gete d in 202 0- 202 1	Act ual Exp ense s in 202 0- 21	Bu dge ted in 201 9- 202 0	Act ual Exp ense s in 201 9- 202 0	Bud gete d in 201 8- 201 9	Act ual Exp ense s in 201 8- 201 9	Bud gete d in 201 7- 201 8	Act ual Exp ense s in 201 7- 201 8	Bud gete d in 201 6- 201 7	Act ual Exp ense s in 201 6- 201 7
Laborator y Equipmen t	50,000	47,181	1800 00	19094 8	63000	56592	11630 00	11602 14	17650 0	19384 7
Software	0	0	0	0	0	0	0	0	0	0
Laborator y Consuma ble	2,000	1,617	2500 0	26025	63000	66331	70700	49621	37000	38330
Maintena nce and Spare	2,20,0 00	2,10,4 78	1800 00	23876 0	31450 0	35239 6	62870 0	72263 3	31400 0	28433 0
R & D	41,00, 000	39,05, 302	2500 000	26541 45	15730 00	15552 69	14775 00	14922 95	78500	10839 1
Training and Travel	1,20,0 00	1,13,0 29	2420 00	23270 8	31430 0	25634 5	31450 0	26963 7	25150 0	22118 0
Administr ative Expenses	11,00, 000	10,54, 887	6000 000	69482 24	78634 00	78055 53	94310 00	96543 57	99251 00	96849 39
Financial Charges	18,00, 000	17,89, 942								
Total	73,92, 000	71,22, 436	9127 000	10290 810	10191 200	10092 486	13085 400	13348 757	10782 600	10531 017

10.3.1 Adequacy of budget allocation (10)

A. Quantum of budget allocation for three years

Table 10.3.1 : Quantum of budget allocation

S.No	2020- 2021	2019- 2020	2018- 2019	2017- 2018
1	73,92,000	80,01,000	90,89,350	1,25,34,000

B. Justification of budget allocation for three years

The yearly budget is prepared based on the needs & requirements of the Department by taking into consideration of purchase of laboratory & infrastructure developments, Students, faculty & staff requirements and promotions. Budget estimates will be prepared by the department and will be reviewed in HODs meeting with the Principal. After having deliberations, prepared budget made altered in the departments and forwarded to the Principal for preparing final budget at college level. The final budget is sent to Management for approval and sanction. The Management will approve after passing the same in the Governing council meeting. The allocation of budget and utilization for the last three years is adequate.

10.3.2 Utilization of allocation funds (20)

Table 10.3.2 Budget Utilization Summary

Years	Budgeted	Expenses	Utilization of funds %
Budget in CFY (2020 - 2021)	73,92,000	71,22,436	96.35
Budget in CFY m1(2019 - 2020)	9127000	10290810	100
Budget in CFYm2 (2018 - 2019)	10191200	10092486	99.03

10.4. Library and Internet (20)

10.4.1. Quality of learning resources (hard/soft) (10)

Mar Ephraem library is one of the kind spacious buildings with all the modern amenities that plays a pivotal role in all the aspects of academics and other related sources of enrichment in the quantity and quality of knowledge of all the stake holders related to it, comprises of a wide range of academic resources such as books, periodicals, online databases, e-journals, back volumes, CDs/DVDs, project reports, question bank etc.

Table 10.4.1.a: Library Details

Features	Description
Physical Area of Library	Total area of library : 1004 Sq. M
	Periodicals, E-Library and Reading area : 576 Sq M
	Reference and Stack Room : 428 Sq M
	Number of seats in reading space : 125
	Number of seats in E-Library : 25
Library Holdings	Total No. of volume of Books : 13342
	Total No. of Title of Books : 4625
	Total No. of Journals & Magazines : 43
	Total No. of E-Journals (Delnet) : 400
	Total No. of CDs/DVDs : 552
	Total No. of News Papers : 8
	E-Books : 310
Library Facilities	OPAC facility
	E-library facility (NPTEL Videos & CD/DVD database)
	Back Volumes
	Project Reports
	Question Bank (Hard/Soft Copies)
	Inter Library Loan facility (through DELNET)
	Reprographic facility
	Scanning and Printing facility
	Wi-Fi facility
Library Automation	Library is fully automated with Info Library Software with Barcode facility
	Users can be accessed to library resources and circulation status through OPAC
Library Membership	DELNET - New Delhi
	National Digital Library of India
Library Timings	On Working Days : 8.30 AM to 7.00 PM
	Weekend : 8.30 AM to 6.00 PM
	On Holidays : Library remains Closed
Library Staff Details	1. Dr. G.PRINCE, Ph.D. , Librarian
	2. V. SANTHI, M.L.I.Sc., Library Assistant
	3. R. Raja Bright Singh, Attender

Table 10.4.1.b: Book Details

Year	Number of new Titles added	Number of new editions added	Number of new Volumes added
CAYm3 (2017-2018)	427	95	786
CAYm2 (2018-2019)	204	44	341
CAYm1 (2019-2020)	205	31	273
CAY (2020-2021)	62	23	68

Table 10.4.1 c: Subscribed Journal Details

Year	Print Journals	E- Journals
CAYm3 (2017-2018)	50	105 (Proquest e-Journals)
CAYm2 (2018-2019)	36	400 (DELNET Journals)
CAYm1 (2019-2020)	43	400 (DELNET Journals)
CAY (2020-2021)	47	400 (DELNET Journals)

Table 10.4.1 (d) Library expenditure on books, magazines/journals, and miscellaneous contents

Year	Expenditures (Rs.)				
	Books	Journal/Magazine Subscription (Print Version)	E- Journal Subscription	News papers	Misc.Contents
CAYm3 (2017-2018)	751697	117255	83000	15730	163910
CAYm2 (2018-2019)	130687	80650	13570	15780	778
CAYm1 (2019-2020)	117232	116400	13570	17300	170
CAY (2020-2021)	29696	95833	13570	1985	-

10.4.2 Internet

Name of the Internet Providers: BSNL & Shine Plus

A. Available bandwidth

- BSNL – 40 Mbps (NMEICT leased line) for LAN connections
- Shine plus – 40 Mbps (Private leased line) for Wi-Fi connections

Total Bandwidth: **80 Mbps**

B. Wi-Fi Availability

- Fully Wi-Fi campus

Wi-Fi connections for all the staff and students is provided after registering the MAC address.

C. Internet access in Labs, classrooms, library and offices of all Departments

- Office, library and all Labs as well as offices of all departments are provided with internet connection through LAN
- All class rooms are connected with internet through Wi-Fi

D. Security Mechanism

- Fort iGATE 200 D firewall is used as the security mechanism for all the LAN and Wi-Fi connections.

Declaration

The head of the institution needs to make a declaration as per the format given –

- I undertake that, the institution is well aware about the provisions in the NBA's Accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

Name : Dr.A.Lenin Fred

Designation : Principal

Signature :

Prof. Dr. A. Lenin Fred, M.E., Ph.D.
PRINCIPAL

MAR EPHRAIM COLLEGE
OF ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAVUVILAI, MARTHANDAM - 629 171,
KANYAKUMARI DISTRICT, TAMILNADU, INDIA.

Seal of The Institution :



Place : Marthandam

Date : 28-01-2022